Transcript of Dr. Robert Lochhead

Date: July 10, 2025
Case: Dr. Squatch, LLC -v- The Proctor and Gamble Company (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

Exhibit 1081
Dr. Squatch v. P&G
IPR2024-01498

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UNITED STATES PATENT AND TRADEMARK OFFICE

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PATENT TRIAL AND APPEAL BOARD

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DR. SQUATCH, LLC,

Petitioner,

V.

THE PROCTOR & GAMBLE COMPANY,

Patent Owner.

_____

U.S. Patent Nos. 10,966,915; 11,497,706;
10,905,647; 11,433,018
IPR Nos. 2024-01104; 2024-01105;
2024-01173; 2024-01174

Deposition of DR. ROBERT LOCHHEAD
REMOTE VIA ZOOM
Thursday, July 10, 2025
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Reported By: Rachel F. Gard, CSR, CCR, RPR, CRR

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Deposition of DR. ROBERT LOCHHEAD, held remotely via Zoom:

Pursuant to notice, before Rachel F. Gard, CSR, CCR, RPR, CRR, Notary Public in and for the States of Indiana and Michigan.

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A P P E A R A N C E S

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1 P R O C E E D I N G S
2 (Witness sworn.)
3 WHEREUPON:
4 DR. ROBERT LOCHHEAD,
5 called as a witness herein, having been first duly
6 sworn, was examined and testified as follows:
7 CROSS-EXAMINATION
8 BY MR. CALABRO:
9 Q Good morning, Dr. Lochhead.
10 **A Good morning.**
11 Q Is that how -- did I pronounce your name
12 correctly?
13 **A Yes, yes.**
14 Q Good morning. So you've been deposed
15 before, right?
16 **A Yes.**
17 Q You know how this works?
18 **A Well, I think so. Everybody is --**
19 Q Fair. So I'll be asking you a series of
20 questions. If you could respond verbally so the
21 court reporter can transcribe your testimony, that
22 would be good.
23 Understood?
24 **A Yes.**
25 Q And let's try to wait for each other to

6

1 finish our answers so we can get a clean
2 transcript. All right?
3 **A Yes.**
4 Q And you understand you're under oath,
5 correct?
6 **A I do.**
7 Q Okay. And who is in the room with you
8 today?
9 **A Marlee Hartenstein is in the room with me.**
10 Q Anyone else?
11 **A No, that's all.**
12 Q And you have some documents with you?
13 **A Yeah. We have the documents. I think all**
14 **the documents I relied on are here and my reports.**
15 Q So you have your reports, and you have
16 Dr. Michniak-Kohn's reports?
17 **A I don't know -- yeah. Yes, I do.**
18 Q And then you have the exhibits to those
19 reports as well?
20 **A Yes.**
21 Q Anything else with you, any notes or
22 anything like that?
23 **A No, no.**
24 Q How did you prepare to testify today?
25 **A Well, I spent the last couple of days**

7

1 **going over my reports with counsel. And before**
2 **that, more than 50 years of experience in the**
3 **field prepared me in a nutshell.**
4 **Can you hear me okay?**
5 Q I can hear you well. Can you hear me?
6 **A Yes. My allergies are kicking in today.**
7 **So if you can't hear me, just let me know.**
8 **Especially, Court Reporter, let me know and I'll**
9 **try my best to speak up.**
10 Q Appreciate it. Sounds fine on my end so
11 far.
12 **A Okay.**
13 Q Tell me about your educational background,
14 Dr. Lochhead.
15 **A Okay. I began as -- I did something**
16 **called High National Certificate in Scotland,**
17 **which was the Royal Society of Chemistry. That**
18 **led me to a bachelor's degree in chemistry at**
19 **University of Strathelyde, which then led to a**
20 **Ph.D. at the University of Strathelyde and postdoc**
21 **at Carnegie-Mellon University. And that was my**
22 **formal education. And the postdoc was in chemical**
23 **engineering. All the rest were in chemistry,**
24 **material science.**
25 Q Do you have any specialty? Or what was

8

1 your thesis in?
2 **A Oh, my thesis was in dielectric**
3 **relaxation. What it looked at was how helical**
4 **molecules -- what were the shape of helical**
5 **molecules in a nutshell. People couldn't figure**
6 **out DNA fit in the cell because they thought it**
7 **was a spring, and I showed it was a Slinky. But**
8 **not with DNA, with other helical molecules. But**
9 **that explained to people how a Slinky could fit**
10 **into the nucleus of a cell. It's a rod.**
11 **Basically that's what my Ph.D. was about showing**
12 **the helical molecules were Slinkies rather than**
13 **rods.**
14 Q And please tell me about your employment
15 history.
16 **A I started as a lab assistant in ICI Nobel**
17 **Division. What I did there was explosives**
18 **analyses, ethers, surfactants, and also silicons**
19 **that I was a silicon synthesis, silicon chemist.**
20 **And then after, then I did my bachelor's, Ph.D.,**
21 **and then 10 years with Unilever. I was a**
22 **background scientist in the Unilever lab. My job**
23 **was to know background scientists guided**
24 **formulators.**
25 **Following that, I came to B.F. Goodrich,**

9

1 where I eventually headed up the hydrophilic
2 polymers group. But we made hydrophilic polymers
3 for all sorts of applications, including
4 cosmetics, personal care, pharmaceuticals. And my
5 job was to, again, understand where it was fitted
6 and educate customers on -- clients on how to use
7 materials and to invent new materials.
8 Then I transferred to the University of
9 Southern Mississippi and the School of Polymer
10 Science and Engineering. And it was Polymer
11 Science at the time. It's now Polymer Science and
12 Engineering. But I chaired that department for
13 about 20 years and was a faculty member the other
14 times, and then currently I'm professor emeritus
15 in the university.
16 Q Let me go back to your time at Unilever.
17 What sorts of products were you involved with
18 formulating there?
19 A Well, actual formulating was in
20 conditioning shampoos. We were looking at varying
21 conditioning shampoos. My job was actually to be
22 in the background. I provided background
23 information to hair, skin, dental -- hair, skin,
24 and dental people formulating. So what I did was
25 I guided the formulators with the science. That

10

1 was my job. That was basic -- I did basic
2 science.
3 Q Okay. So what kind of background
4 information would you provide?
5 A Oh, well, take conditioning shampoos, for
6 example. I would explain to them -- in those
7 days, we didn't really know how they work. I
8 figured out the mechanism and taught the
9 formulators how they worked and, therefore, what
10 they could do and what they couldn't do.
11 In hairsprays, I figured out the
12 properties of the polymers, how to use the
13 polymers, how to measure, how to test the
14 polymers, how to put them into your formulation,
15 how to specify what you need. And I did lots in
16 polymers.
17 Then I moved to Colloid and Surface
18 Science. In Colloid and Surface Science, we
19 covered not just polymers but advised the people
20 in skin and dental as well on things like hardness
21 for toothpastes, for example, and then how to
22 measure, how to incorporate what to do, what
23 problems they might run into.
24 But basically that was -- my gamut was I
25 was called in to see which other area was going

11

1 on. Most of my work was in hair, but I did go
2 into the other areas as well.
3 Q And by "other areas," what do you mean?
4 A Skin and teeth. Hair, skin, teeth.
5 Products for skin, products for teeth, products
6 for hair.
7 Q And do you have any experience either
8 formulating or providing background information to
9 formulators that specifically relates to
10 deodorants?
11 A Yes, yes, I did some work in Unilever,
12 mainly guiding people a little. But I've
13 consulted in deodorant, yes. Indeed, yes.
14 Q What time period was this?
15 A Oh, in Unilever, this was the '70s. My
16 consultation -- well, when I worked for Goodrich,
17 I was guiding people on how to use polymers. But
18 my consultation in sticks started in the '90s and
19 in deodorants in general, that's when I worked
20 with companies and consulting.
21 Q Okay. And what kind of consulting
22 services did you provide with respect to
23 deodorants?
24 MS. JEFFRIES: And, Dr. Lochhead, I'd at
25 this point caution you to not reveal any

12

1 confidential information of your consulting that
2 you may have done. Of course you can answer and
3 speak generally at a high level. I just want to
4 make sure you don't breach any confidentiality
5 agreements.
6 A I can't remember the detail because the
7 kind of things that we did in my consulting was
8 mainly to help my students and get my students
9 involved with these companies, to get my students
10 internships in these companies and, as part of
11 that, I did consulting. I can't remember the
12 detail of deodorants and antiperspirants, but
13 yeah, I did some deodorant and antiperspirant
14 consulting.
15 Q And do you recall generally the nature of
16 the services you provided?
17 MS. JEFFRIES: Objection. Asked and
18 answered.
19 A Services, well, I think the services, I
20 said were -- I was more interested in getting the
21 companies to be interested in my students, and so
22 I provided -- and as a result, they usually come
23 in and ask me to consult, and I consulted for many
24 companies across the board. They'd ask me before
25 we started projects, for example, that's how we'd

13

1 **get into projects. They'd come to me with**
2 **problems and of any work done. We actually did**
3 **work in my lab in the university, and that was the**
4 **kind of consulting. I don't know if that answers**
5 **your question, but that's the kind of consulting I**
6 **did.**
7 Q What kind of question would a company --
8 you don't have to reveal the company's name. But
9 what kind of question would a company come to you
10 that relates to deodorants and seek your expertise
11 in?
12 **A Oh, I can't remember off the top of my**
13 **head here. But mainly how to put things together**
14 **and how to measure properties. That was what we**
15 **did.**
16 Q Do you recall generally when the last time
17 you consulted regarding a deodorant was, like,
18 what the general time period was?
19 **A Oh, gosh.**
20 MS. JEFFRIES: That's vague.
21 **A I don't know. I could have consulted on**
22 **the basic science all the way through. For a**
23 **natural deodorant -- remember when the companies**
24 **consulted with me, we were looking at broad**
25 **science that was mainly to specify what became**

14

1 **more specific. I would think somewhere between**
2 **the '90s and -- 1990s and the 2000s is when I**
3 **probably consulted in that area.**
4 Q Okay. So fair to say it's been about
5 20 years since you consulted with respect to a
6 deodorant?
7 MS. JEFFRIES: Objection.
8 Mischaracterizes testimony.
9 **A Actively consulted, perhaps 10 years ago.**
10 **I've been involved in the industry and reading and**
11 **understanding and guiding people up until, well,**
12 **very recently.**
13 Q Now, you have a number of publications
14 that you've authored, right?
15 **A Yes.**
16 Q Have you published on deodorants?
17 MS. JEFFRIES: Objection. Vague.
18 **A I don't think I've published on deodorants**
19 **per se, but I've certainly published on the**
20 **science that is behind deodorants.**
21 Q And what would that science be?
22 **A Well --**
23 MS. JEFFRIES: Objection. Vague.
24 **A -- rheology. Looking at sprays, looking**
25 **at particles -- where the particles -- to design**

15

1 **the right particles for sprays. Looking at**
2 **sticks, how to measure sticks, how to formulate**
3 **sticks, what the composition -- what the structure**
4 **property relationships would be in things like**
5 **sticks.**
6 Q And what type of sticks are you referring
7 to?
8 **A All kind. Lipsticks, deodorants. All**
9 **kinds of sticks. And all kinds of technologies**
10 **that are behind sticks.**
11 Q So is the technology that's behind sticks
12 generally applicable to deodorants?
13 MS. JEFFRIES: Objection. Vague.
14 Mischaracterizes testimony. Misstates.
15 **A There are many different stick**
16 **technologies. And some of them are common**
17 **technologies or common understanding. But, of**
18 **course, you have to modify the properties of the**
19 **product for the application that you're using. So**
20 **you just can't take a stick from one area and pop**
21 **it into another or one technology and pop it**
22 **general. So I think that was the question you**
23 **asked.**
24 Q And can you identify any specific
25 deodorant stick that you worked on formulating?

16

1 MS. JEFFRIES: And, Dr. Lochhead, I'll
2 just give you that same instruction, not to reveal
3 any confidential information.
4 **A Again, could you repeat your question,**
5 **please?**
6 Q Sure. Can you identify any specific
7 deodorant stick that you worked on formulating?
8 MS. JEFFRIES: Objection. Or instruction.
9 **A As I said, I didn't work on specific**
10 **products. Some of them became specific products.**
11 **But my job was to -- or not my job, my role was to**
12 **tell the people the basics, how to put things**
13 **together, what would work and what wouldn't work.**
14 **Some of them, I think you're saying could I**
15 **identify particular products. I could point to**
16 **things I think became products, but I can't be**
17 **sure that the actual technology was used in that**
18 **particular product. I know it was used in many**
19 **products.**
20 Q Can you identify something that you worked
21 on that you think became a deodorant stick?
22 MS. JEFFRIES: Again, same objection not
23 to reveal confidential information.
24 **A That I worked on, well, I'll give you an**
25 **example, I did work with the Bianchi team a while**

17

1 **ago, and I did some work with them. I did work**
2 **generally with the whole company, so I can't**
3 **remember the detail.**
4 Q Did you work with the Bianchi team on a
5 deodorant stick?
6 MS. JEFFRIES: Same instruction not to
7 reveal confidential information. If you can
8 answer without doing that, you may.
9 **A I worked on the basic science that may**
10 **have become deodorant.**
11 Q You have --
12 **A I'm sorry. Antiperspirant.**
13 **Antiperspirant in the case of Bianchi.**
14 Q You have some patents on which you're
15 named as an inventor, right?
16 **A Yes.**
17 Q Do any of those relate to deodorants?
18 MS. JEFFRIES: Objection. Vague.
19 **A Not that I'm aware, no.**
20 Q You're listed as the editor of some books,
21 correct?
22 **A Yes.**
23 Q You edited Cosmetic Nanotechnology,
24 Polymeric Delivery of Therapeutics, and Cosmetic
25 Science and Technology, right?

18

1 **A Yes.**
2 Q What did you do in your role as editor of
3 those books?
4 MS. JEFFRIES: Objection. Compound.
5 Vague.
6 **A As editor, I identified -- first of all,**
7 **identified what content you want in the book and**
8 **then identify people who had expertise in that**
9 **area and who were willing to write in that area.**
10 **And then as editor, I then brought the book**
11 **together and basically guided the writers down to**
12 **edited the writing and then put the -- brought the**
13 **chapters together in the right order and worked**
14 **with the publisher and published the book.**
15 (Deposition Exhibit Number 1 marked
16 for identification.)
17 Q I dropped into the chat what we'll call
18 Exhibit 1. It's U.S. Patent No. 10,966,915.
19 Do you have that?
20 **A Yes. And I think I'm just going to work**
21 **with the paper because I just dropped something**
22 **from the chat and I think it cut everyone off a**
23 **moment ago.**
24 Q Yeah, that's fine. You can look at your
25 paper copies.

19

1 Before we do, I just want to close out
2 something on your background. You've done some
3 work for Procter & Gamble, right?
4 **A Yes.**
5 MS. JEFFRIES: Objection.
6 **A Yes, I've done some work for Procter &**
7 **Gamble.**
8 Q And can you tell me about that consulting
9 work?
10 **A Again, the consulting that I did for**
11 **Procter & Gamble is the same as the consulting I**
12 **did generally. It was mainly looking at -- I was**
13 **trying to place my students in -- Procter &**
14 **Gamble, Johnson & Johnson, SC Johnson, L'Oreal,**
15 **they take my interns, and we did research for them**
16 **at the university. So consulting was mainly in**
17 **association with that kind of activity. And so it**
18 **was mainly directed towards guiding them in the**
19 **science but also placing my students as interns**
20 **and placing my students eventually as employees.**
21 Q Did the consulting relate to any
22 particular product?
23 MS. JEFFRIES: Objection.
24 **A Sorry. Across the board. We consulted**
25 **generally in all sorts of areas.**

20

1 Q What general areas would you consult in
2 for Procter & Gamble?
3 **A Same as I consulted for the other**
4 **companies, things like skin products, hair**
5 **products, oral products, the basic science**
6 **pertaining to oral products, sprays. Basically**
7 **cosmetics and some pharmaceuticals in general, we**
8 **did.**
9 Q And what time period did this consulting
10 for Procter & Gamble take place?
11 **A Oh, in that instance of my students from**
12 **1990 until last June -- maybe 5 years ago,**
13 **10 years ago. About 10 years ago I stopped**
14 **actively consulting with all the companies.**
15 Q Do you recall generally how much you
16 earned from your consulting work with Procter &
17 Gamble?
18 **A It's actually listed on my CV. The**
19 **earning was mainly to support my research, and I**
20 **think about, I don't know, 250,000, 300,000 in**
21 **total. But that was research funds. I mean,**
22 **that's mainly what they gave me was research**
23 **funds.**
24 Q And what research did you do with the
25 funds that you got from Procter & Gamble?

21

1 **A I think it's listed on my CV. I can't**
2 **remember off the top of my head. But the projects**
3 **are actually listed on my CV.**
4 Q Okay. You've also testified on behalf of
5 Procter & Gamble in the past?
6 **A Yes, I did once. I testified -- I don't**
7 **know if "testified on behalf of." I was an expert**
8 **in a case between Procter & Gamble and Unilever,**
9 **but as an expert, I suppose, I don't take sides.**
10 Q Fair enough. Do you recall the -- what
11 that case was about?
12 **A Yes. It was about conditioning shampoos.**
13 **Two-in-one shampoos.**
14 Q Yeah. Did you review the final decision
15 in that case?
16 **A I heard about the final decision. I**
17 **didn't review it.**
18 Q And what was the decision?
19 **A I know that Unilever -- it was an IPR.**
20 **And as far as I'm aware, Unilever won the IPR.**
21 Q Now, let's turn back to Exhibit 1. Let me
22 know when you've got your paper copy.
23 **A Got it.**
24 Q Okay. So you recognize Exhibit 1 to be
25 U.S. Patent No. 10,966,915, right?

22

1 **A I do.**
2 Q We can call that the '915 patent, right?
3 Is that okay?
4 **A Okay.**
5 Q So I'm going to direct your attention to
6 the claims, which are at the end of this patent.
7 Let me know when you're there. Last page.
8 **A I'm there.**
9 Q Okay. So please take a look at claim 1.
10 And you see it recites a deodorant stick
11 comprising (a), (b), and (c), and (a), (b), and
12 (c) each list one of the ingredients of the
13 deodorant, right?
14 **A Yes.**
15 Q So (a) is at least 25 percent liquid
16 triglyceride; (b) is at least one antimicrobial;
17 and (c) is a primary structurant with a melting
18 point of at least about 50 degrees Celsius.
19 Right?
20 **A That's right, yes.**
21 Q Now, is there any ingredient missing from
22 that list to be necessary for a stick to be
23 considered a deodorant?
24 MS. JEFFRIES: Objection. Vague.
25 **A I don't understand your question. The**

23

1 **claim is written in the context of the patent, and**
2 **so that's -- I don't know what you mean if there's**
3 **something that's missing from that. That's a**
4 **hypothetical question, I think.**
5 Q Well, you're an expert. So in the context
6 of this patent, the claim recites three
7 ingredients, right?
8 MS. JEFFRIES: Objection. Vague.
9 **A Claim 1 says a liquid triglyceride, an**
10 **antimicrobial, and a primary structurant. That's**
11 **the requirement of claim 1 and it has to be free**
12 **of aluminum salt.**
13 Q My question is: There's a stick with at
14 least 25 percent liquid triglyceride, at least one
15 antimicrobial, and a primary structurant with a
16 melting point at least 50 degrees C.
17 Is that stick a deodorant?
18 **A Yes. It says it's a deodorant, yes. It**
19 **specifies a deodorant stick.**
20 Q Now, if the claim didn't say deodorant, if
21 a stick had at least 25 percent liquid
22 triglyceride, an antimicrobial, and a primary
23 structurant, would that stick be a deodorant?
24 MS. JEFFRIES: Objection. Incomplete
25 hypothetical. Misleading. Mischaracterizing the

24

1 record.
2 **A Well, the claim doesn't just sit there by**
3 **itself. You see the claim in the context of the**
4 **patent, and so -- or the claim or the written**
5 **description. So to understand the claim, I would**
6 **go to the written description to see what it**
7 **described. And that's why you figure out what it**
8 **applies to.**
9 Q So if we set the claim aside and I have a
10 stick with at least 25 percent liquid
11 triglyceride, an antimicrobial, and a structurant,
12 it's in a stick, would that stick be considered a
13 deodorant?
14 MS. JEFFRIES: Objection. Incomplete
15 hypothetical. Irrelevant. Misleading.
16 **A It may or may not be.**
17 Q And what would determine whether it is or
18 is not?
19 **A When I look at -- are you talking about**
20 **the claim, or are you talking about a stick in**
21 **general?**
22 Q Just a stick in general.
23 MS. JEFFRIES: Objection. Incomplete
24 hypothetical and vague.
25 **A Can you ask me the question again? I'm**

25

1 **sorry. I've forgotten what the question is.**
2 Q A stick has at least 25 percent liquid
3 triglyceride, at least one antimicrobial, and a
4 structurant, it's in a stick, would that stick be
5 considered a deodorant?
6 MS. JEFFRIES: Objection. Incomplete
7 hypothetical and vague.
8 **A It may or may not be. It depends on the**
9 **properties that that stick has, and so it may or**
10 **may not be considered a deodorant.**
11 Q And what properties would the stick have
12 to have to be considered a deodorant?
13 MS. JEFFRIES: Same objections.
14 Incomplete hypothetical and vague. Misleading.
15 **A A lot of properties. Is this in the**
16 **context of the patent, or is this -- sorry. I'm**
17 **asking you questions.**
18 Q Just answer both ways if they're
19 different.
20 MS. JEFFRIES: Objection. Same
21 objections. Incomplete hypothetical. Misleading
22 and vague.
23 MR. CALABRO: Andrea, Andrea, one-word
24 objections. "Vague" is not a proper objection.
25 MS. JEFFRIES: It is.

26

1 MR. CALABRO: No, Andrea, the Trial
2 Practice Guide, page 128, examples of improper
3 objections, "objection, vague." You can't coach
4 the witness. You're limited to one word, so you
5 have to stop, all right.
6 MS. JEFFRIES: Thank you for the lesson.
7 I'll continue to defend the deposition. If you're
8 asking poor questions and you're trying to trick a
9 witness, then that's an inappropriate comment --
10 MR. CALABRO: Andrea, Andrea --
11 MS. JEFFRIES: -- so if you want to have a
12 conversation, we can do it on the record, we can
13 do it off the record, however you want.
14 MR. CALABRO: Stop talking. You can
15 object with one word.
16 MS. JEFFRIES: I'm allowed to speak. I
17 don't know where you're going with this. Why
18 don't we proceed to take a deposition and not
19 waste time on this stuff.
20 Q Dr. Lochhead, do you need the question
21 read back to you?
22 **A Yes, please.**
23 Q I asked if a stick with at least
24 25 percent liquid triglyceride, an antimicrobial,
25 and a primary structurant would be considered a

27

1 deodorant. You said it may or may not be
2 depending on the properties.
3 My question was: What properties would a
4 stick have to have to be considered a deodorant?
5 MS. JEFFRIES: Same objections.
6 **A In the context of this patent, yes, it**
7 **would be considered a deodorant. And I think the**
8 **patent, if you look at the context of the patent,**
9 **it describes the properties.**
10 Q Okay. Now let's go to claim 15 in the
11 '915 patent. Claim 15 has one of the properties,
12 right?
13 **A Yes.**
14 MS. JEFFRIES: Objection.
15 Mischaracterizes.
16 Q And it says: The deodorant stick of
17 claim 1 wherein said stick has a hardness from
18 about 80 decimillimeters to about 140
19 decimillimeters measured by penetration with an
20 ASTM D1321 needle, right?
21 **A Can you tell me the units you're using?**
22 Q Maybe you can tell me the units if I got
23 them wrong. What units are recited in claim 15?
24 **A Well, the patent tells you what the units**
25 **are. If you'd give me a minute, I'd like to be**

28

1 **accurate. I'd like to look at where it tells you.**
2 If you go to column 13, it says: To
3 report the results of penetration are 10ths of a
4 millimeter. 1/10th of a millimeter equals 100
5 microns. For example, 80 units is 80 millimeters
6 times 10, so that's reported in 10ths,
7 8 millimeters. Your penetration would be
8 8 millimeters, the specification would be -- of
9 the claim would be 8 millimeters to
10 14 millimeters, I'll do it that way.
11 Q Now, if we look back at claim 1, would all
12 deodorants with the three ingredients listed in
13 (a), (b), and (c), fall within the hardness range
14 of claim 15?
15 MS. JEFFRIES: Objection. Vague.
16 **A Could you say the question again? I want**
17 **to get it right in my mind. Sorry. Would all --**
18 Q Would all deodorants with the three
19 ingredients listed in (a), (b), and (c) in claim 1
20 fall within the hardness range of claim 15?
21 **A Yes, because claim 1 is written in the**
22 **context of the patent. The patent teaches you**
23 **what's required, and the patent actually -- if you**
24 **look at the patent, one of the requirements of the**
25 **patent is that deodorants have that hardness. So**

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1 **if you read the patent in total, you find that**
2 **sticks that they talk about have that -- fall**
3 **within that hardness range.**
4 Q Could there be a stick that had at least
5 25 percent liquid triglyceride, at least one
6 antimicrobial, and a primary structurant with a
7 melting point of at least 50 degrees C that did
8 not fall within the hardness range of claim 15?
9 MS. JEFFRIES: Objection. Incomplete
10 hypothetical.
11 **A In the context of this patent, no.**
12 **Outside the context of this patent, it's possible.**
13 Q So how would one skilled in the art have
14 gone about formulating a deodorant with these
15 three ingredients to meet the desired hardness?
16 **A Well, the patent actually tells you. It**
17 **gets into -- the patent has pretty precise**
18 **instructions on how to make the stick, and so**
19 **that's -- a person trying to make the stick with**
20 **this hardness would follow the instructions in the**
21 **patent.**
22 Q And what does the patent tell someone
23 skilled in the art about how to make a deodorant
24 that has the desired hardness?
25 MS. JEFFRIES: Objection. Calls for a

30

1 narrative.
2 **A I think the patent -- the patent defines**
3 **the ingredients pretty well and then actually does**
4 **lay out the procedure for making the -- making the**
5 **stick in the case of a deodorant stick.**
6 Q Are you done answering, or are you going
7 to point me to something?
8 **A You can ask me another question.**
9 Q Sure. So what specifically does the
10 patent tell someone skilled in the art to do to
11 make a deodorant with the desired hardness?
12 **A Well, for example, starting at column 10**
13 **is the method of making, and what it says is that**
14 **you take the different materials and you put them**
15 **together, and it specifies that you have to be**
16 **very careful that you don't get water or**
17 **adventitious water in the material that says Y.**
18 **So you have to have an open tank, an open mixer,**
19 **or a vented mixer to get rid of any water vapor.**
20 **You then melt the components together and**
21 **you -- once the components are melted together, it**
22 **then instructs you how to mold it, the material**
23 **into a stick on columns 10 and 11. And then it**
24 **goes on to tell you how to test the stick.**
25 Q And will all sticks made by that process

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1 have the claimed hardness?
2 MS. JEFFRIES: Objection. Incomplete
3 hypothetical.
4 **A Well, all sticks made by that process, you**
5 **have -- all sticks, that's a huge composition**
6 **range you've given me. But no, they specify a**
7 **particular process for the stick that they are**
8 **making.**
9 Q So how would one skilled in the art go
10 about selecting the ingredients and the amounts of
11 ingredients to achieve the desired hardness?
12 **A Well, if one --**
13 MS. JEFFRIES: Objection. Overly broad
14 and vague. Answer, if you can.
15 **A One skilled in the art would read the**
16 **patent and it would -- they'd follow the**
17 **directions in the patent, and they would also have**
18 **enough skill to make a material. One skilled in**
19 **the art would know how to make these things. But**
20 **with the instructions in the patent, they could**
21 **follow the patent and make it.**
22 Q How would a POSA have -- by "POSA," I'm
23 referring to a person of ordinary skill in the
24 art?
25 **A I know.**

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1 Q So how would a POSA have gone about
2 selecting a structurant to achieve the desired
3 hardness?
4 **A That actually tells you. There's a whole**
5 **section on structurants. And on columns 3 and 4**
6 **into 5 and even into 6, there's -- there's a**
7 **section on how to choose a structurant. Do you**
8 **want me to read it or ...**
9 Q No, that's not necessary.
10 So let's say a POSA picked one of those
11 structurants. How would the POSA then vary the
12 amount of that structurant and to achieve the
13 desired hardness?
14 MS. JEFFRIES: Objection. Vague.
15 Incomplete hypothetical.
16 **A Well, a person of ordinary skill in the**
17 **art would roughly know the limits of when to use a**
18 **structurant, how to use a structurant. And in**
19 **this case, they'd be guided, for example, by the**
20 **example in Table 1, which shows you the kind of**
21 **range of structurant that you can have, the types**
22 **of structurant you can have. And that would guide**
23 **a person how to use it.**
24 **The other thing is, of course it does --**
25 **they do tell you in the patent in the section I've**

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1 **just explained to you, they give these percentage**
2 **ranges that you can use for the structurant.**
3 Q Now, so let's go to Table 1 that you
4 pointed to. And that lists a couple of
5 comparative formulas, right?
6 **A Yes.**
7 Q And the patent -- by the way, do you know
8 what those comparative formulas were?
9 **A No, I don't.**
10 MS. JEFFRIES: Objection. Vague.
11 Q Did you see Dr. Michniak-Kohn matched up
12 nine of the ingredients with the Native prior art
13 label?
14 **A Yes, but the label is just a list of**
15 **ingredients. It doesn't tell you how to -- the**
16 **absolute concentrations are what they are. Yes,**
17 **speculation is it could be the Native product, but**
18 **that's all I've seen that says it could be Native.**
19 **You could speculate it's Native, but you need to**
20 **know more information.**
21 Q And you understand Native is a P&G
22 product, right?
23 **A Yes.**
24 MS. JEFFRIES: Objection. Vague. And
25 misstates the factual record.

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1 Q Did you ask P&G if these comparative
2 formulas were Native?
3 **A No.**
4 Q Okay. So if we look at comparative
5 formulas 1 and 2, they're reported to be too hard,
6 right?
7 **A Yes.**
8 Q And so what adjustments were made to make
9 them less hard?
10 MS. JEFFRIES: Objection. Incomplete
11 hypothetical. Assumes.
12 **A I think that's what the patent explains,**
13 **that they adjusted the composition to get the**
14 **hardness just right.**
15 Q And what -- specifically what ingredients
16 did they adjust?
17 **A Well, of course the principal ingredients**
18 **would be the structurant and the liquid. But all**
19 **of the ingredients would have had an effect on the**
20 **hardness. As you add other ingredients, it would**
21 **also have an effect on the hardness.**
22 Q If you look right under Table 1, in column
23 3, it says: It is known that to formulate a solid
24 antipersperant or deodorant stick, the
25 structurants generally have a melting point above

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1 50 degrees C to provide stable structure to the
2 stick.
3 Is that accurate?
4 **A I think it is, yeah.**
5 Q And if you look at the top of column 3, it
6 says: In order to provide structure to the
7 deodorant stick composition, the formulation may
8 also include a number of waxes and other
9 structurants. However, the structurants used may
10 lead to deodorant sticks that are very hard. For
11 example, a currently marketed product, comparative
12 formula 1 below, has 34.15 percent liquid
13 triglyceride along with a number of structurants
14 resulting in a very hard stick, scoring 63 on a
15 needle penetration test under ASTM D1321 as
16 described herein.
17 And then it continues: Comparative
18 formula 2 contains even higher levels of
19 structurants resulting in a harder stick with a
20 lower hardness score.
21 Do you see that?
22 **A Yes.**
23 Q And so here, the inventors are saying that
24 it's the high levels of structurants that
25 contributed to the overly hard structure of the

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1 comparative formulas, right?
2 **A No. What they're saying is they know it's**
3 **a high level of structurant. As I explain in my**
4 **report, this is not just a case of putting things**
5 **together, arithmetically calculating things.**
6 **These structures that you get, wax structures**
7 **are -- basically what you have is wax crystals**
8 **that are flocculated, and it depends on the size**
9 **and shape and the right crystals and how they**
10 **flocculate. And they have to be put together so**
11 **you get -- that's what determines not just the**
12 **hardness or all the other properties of the stick**
13 **that make a useful product, so it's important to**
14 **get not just the structurants but the whole**
15 **formulation just right because anything in that**
16 **formulation could knock it off and change that**
17 **crystal structure. But someone skilled in the art**
18 **would, with the proper instructions, could**
19 **actually reproduce that structure.**
20 Q Okay. But that's knowledge that you
21 brought to this patent as someone skilled in the
22 art, correct?
23 **A No, it's knowledge that I would expect**
24 **someone skilled in the art -- remember, I teach**
25 **all levels, and this is kind of some of the stuff**

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1 **I teach, that I'd expect someone skilled in the**
2 **art to be able to do that.**
3 Q Now, if you turn back to claim 1 at the
4 end of the patent, would a deodorant stick with
5 the three ingredients, at least 25 percent liquid
6 triglyceride, at least one antimicrobial, and a
7 primary structurant with a melting point of at
8 least 50 degrees C, would that deodorant be
9 stable?
10 MS. JEFFRIES: Objection. Vague.
11 **A It --**
12 MS. JEFFRIES: Incomplete hypothetical.
13 **A If you followed the instructions in the**
14 **patent, you could make a stable stick. But of**
15 **course -- yeah, if you followed the instructions,**
16 **a person of ordinary skill in the art would know a**
17 **stick was stable.**
18 Q How would the person of ordinary skill in
19 the art know that?
20 **A By looking at it. By putting the thing**
21 **together and saying, yeah, does it -- is it**
22 **exuding liquid, for example. Is it separating in**
23 **some way. They would know that. That's part of**
24 **what a person of ordinary skill in the art would**
25 **do. They'd use this to put together the stick**

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1 **and, as they put it together, they'd know whether**
2 **it was stable or not.**
3 Q And then let's say they saw it was not
4 stable, how would a person of ordinary skill in
5 the art have gone about making it stable?
6 MS. JEFFRIES: Objection. Incomplete
7 hypothetical.
8 **A A person of ordinary skill in the art**
9 **would follow the instructions in the patent and**
10 **adjust the formula as necessary.**
11 Q Well, what does the patent tell the person
12 of ordinary skill in the art to do to make it
13 stable?
14 MS. JEFFRIES: Objection. Incomplete
15 hypothetical.
16 **A The patent actually lays out how to make a**
17 **stick. And it lays out the ingredients in the**
18 **stick. It lays out how to select the ingredients,**
19 **how to put them together. And a person of skill**
20 **in the art with that information would know how to**
21 **make a stick and know how to know -- and know when**
22 **it was stable.**
23 Q So just to be clear, though, claim 1 with
24 those three ingredients might -- that deodorant
25 stick might be stable or it might be unstable,

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1 right?
2 **A Well, claim 1 doesn't stand alone. I've**
3 **said before, you have to read it in the context of**
4 **the patent. And the context of the patent says,**
5 **for example, if you -- if you don't follow the**
6 **instructions and you add some water, you don't**
7 **take all the water out. That's what it tells you.**
8 **You could make an unstable stick just because you**
9 **haven't taken all the water out. So you have to**
10 **follow what -- the instructions in the patent, and**
11 **then you'll know whether you've got a stable stick**
12 **or not.**
13 Q Would all deodorants made according to the
14 instructions in the patent be stable?
15 MS. JEFFRIES: And asked and answered.
16 Incomplete hypothetical.
17 **A Not necessarily. The patent describes how**
18 **to make a stable stick. But a POSA would know**
19 **when the stick was stable and when the stick is**
20 **unstable. That's what you expect from a POSA.**
21 Q So a stick made with the ingredients in
22 claim 1, according to the patent, might be stable
23 or unstable, correct?
24 MS. JEFFRIES: Objection.
25 Mischaracterizes testimony.

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1 **A No, I think if you follow the instructions**
2 **of the patent, you make a stable stick. But like**
3 **everything else, there might be some case where**
4 **you could make a stick that bled, for example.**
5 Q Well, what in the patent specifically
6 guarantees that the stick would be stable, in your
7 view?
8 **A List of ingredients, a POSA would know**
9 **which ingredients -- it tells which ingredients to**
10 **use. It tells you how much to use. It tells you**
11 **how to use them and how to make and use them, and**
12 **you follow the instructions. And -- well, if they**
13 **didn't make a stable stick, it wouldn't be a**
14 **patent. So it tells you how to make a stable**
15 **stick. But if the stick was unstable, a POSA**
16 **would recognize that that stick was unstable. And**
17 **that's what I'm saying.**
18 Q And would a POSA be able to --
19 **A Let me, these structures, remember, are**
20 **flocculated structures. They're loose structures.**
21 **And what you do is you get a loose flocculated**
22 **structure that traps a liquid and metastases. And**
23 **sometimes slight changes can actually give you an**
24 **unstable stick.**
25 **But what this patent tells one is how to**

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1 **make a stick, and a POSA would know when it was**
2 **stable and when it was unstable. And, you know,**
3 **it tells you how to make a stable stick.**
4 Q And did you do any testing to see whether
5 the sticks made according to this process were
6 stable?
7 **A No.**
8 Q And is there any stability testing
9 disclosed in this patent?
10 **A No. Not that I know of.**
11 Q Okay. And you're concluding based on the
12 absence -- without any stability testing
13 whatsoever, without doing any testing of your own,
14 and without reviewing any reported testing, you're
15 concluding that all sticks made according to this
16 patent are stable?
17 MS. JEFFRIES: Objection.
18 Mischaracterizes testimony.
19 **A No, I'm not making that assumption. I'm**
20 **telling you that the patent tells you how to make**
21 **a stable stick. And if something was -- if you**
22 **modified the formula or are putting it -- I think**
23 **what you're asking was, how would you know whether**
24 **it's unstable or not. A POSA would see the**
25 **instability. But what this does is it teaches you**

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1 **how to make a stable stick. It says if you follow**
2 **these instructions, you can make a stable stick.**
3 Q And where does it say that the stick will
4 be stable?
5 **A Well, it says a deodorant stick, and it**
6 **gives you a hardness range. And the hardness**
7 **range then tells you that you made a stick with**
8 **that hardness.**
9 MS. JEFFRIES: So, Josh, we've been going
10 a bit over an hour. When convenient, can we take
11 a short break?
12 MR. CALABRO: Yeah, I'm fine taking a
13 break now. How long do you want or how long do
14 you want, Dr. Lochhead.
15 MS. JEFFRIES: I would say maybe
16 10 minutes maybe just to use the restroom, if
17 that's okay.
18 MR. CALABRO: That's fine. Let's go off
19 the record.
20 (A short break was taken.)
21 Q Welcome back, Dr. Lochhead. Did you
22 discuss anything on the break?
23 **A Did I discuss anything? Yeah, yeah.**
24 Q What did you discuss and with whom?
25 MS. JEFFRIES: Object to that and instruct

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1 the witness not to answer anything that would
2 reveal any attorney work product or confidential
3 information. You can answer generally.
4 **A Yeah, that's what I did. We talked**
5 **niceties and pleasantries, and that's about it.**
6 Q Did you discuss anything about the
7 substance of your testimony?
8 **A No.**
9 Q I want to circle back to our last
10 exchange. The question was: Where does it say
11 that the stick will be stable? The answer was:
12 Well, it says deodorant stick, gives you a
13 hardness range, and the hardness range then tells
14 you that you made the stick with that hardness.
15 So is it the case that a stick with a
16 given hardness is stable?
17 MS. JEFFRIES: Objection.
18 Mischaracterizes testimony.
19 **A You wouldn't normally go to a hardness**
20 **test unless the stick was completely stable, and**
21 **the instructions tell you to hold the material for**
22 **24 hours, at least 24 hours, and then do the**
23 **hardness test. But I think a POSA would know when**
24 **it's a stable stick.**
25 Q And let's turn back, please, to Table 1 in

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1 the '915 patent that we've marked as Exhibit 1.
2 It's in column 3. And you see the comparative
3 formulas there, right, Dr. Lochhead?
4 **A Yes.**
5 Q Now, are those complete deodorant sticks?
6 **A Well, the patent says that they're**
7 **complete deodorant sticks, yes.**
8 Q Okay. But the patent says there were
9 issues with these sticks; they were too hard,
10 right?
11 **A Yes. The comparative formula 1 and**
12 **comparative formula 2 were too hard. They were**
13 **complete deodorant sticks, but they were too hard.**
14 **They didn't meet the hardness requirement that the**
15 **patent -- the patent specifies.**
16 Q And so there was a motivation to make them
17 better, to make them less hard, right?
18 **A That's correct.**
19 Q Do you -- and then if you look, again,
20 still on Table 1, you see the comparative formulas
21 as well as the inventive examples have arrowroot
22 powder, right?
23 **A Yes, a comparative example. Inventive**
24 **formulas 1 through 4 have arrowroot powder, yes.**
25 Q And is arrowroot powder a structurant in

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1 the context of the patent?
2 MS. JEFFRIES: Objection. Incomplete
3 hypothetical. Beyond the scope.
4 **A The purpose of adding arrowroot powder is**
5 **to absorb sweat, absorb water. And the use is a**
6 **structurant. It's not defined as a structurant.**
7 **But will it effect the structure? It could. You**
8 **know, many of the ingredients could affect the**
9 **structure.**
10 Q And turn, please, to column 12 in the '915
11 patent. Line 20, do you see it refers to periodic
12 calibration should confirm, and then it lists
13 certain things that are confirmed through this
14 calibration?
15 **A Oh, yeah. Periodic calibration confirm,**
16 **yeah, that the instruments are clean from dust and**
17 **grime.**
18 Q What does periodic calibration mean?
19 **A Well, if you're making measurements, and**
20 **we do this with all our instruments, they really**
21 **need to be calibrated to make sure that the**
22 **measurement you're making is accurate, and some**
23 **instruments need to be calibrated after every**
24 **measurement. Some instruments need to be**
25 **calibrated once a day, twice a day, once a week.**

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1 **In my lab, that was normal procedure.**
2 **That was a very important thing to do is to**
3 **calibrate the instruments to make sure that they**
4 **were correct. For example, I ran the first NMR in**
5 **Scotland, and we had to shim the magnets after --**
6 **before and after every measurement. If we were to**
7 **do that for MRI today, I think it would take --**
8 **we'd never be able to get all the MRIs done. But**
9 **basically what you have to do is calibrate your**
10 **instruments to make sure they're measuring**
11 **accurately.**
12 Q And then under periodic calibration, it
13 says in the third paragraph: Ensure the total
14 weight of the shaft and needle is 50 plus or minus
15 .2 grams when the shaft is in free-fall?
16 **A Yes.**
17 Q So why would periodic calibration be used
18 to confirm the weight of the shaft and needle?
19 **A Because that's critical to measuring**
20 **hardness. If you change the weight, you're going**
21 **to get a wrong reading.**
22 Q And if you go up to column 10, please, at
23 the bottom around line 57, and it says:
24 Non-limiting examples of other optional materials
25 include emulsifiers, distributing agents,

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1 antimicrobials, pharmaceutical or other topical
2 active, preservatives, surfactants, chelants, and
3 so forth. Examples of other optional materials
4 are described in, and it lists three patents,
5 which descriptions are incorporated herein by
6 reference.
7 Do you see that?
8 **A Yes.**
9 Q Did you review those patents in connection
10 with your work on this case?
11 **A No, I did not.**
12 (Deposition Exhibit Number 2 marked
13 for identification.)
14 MR CALABRO: So I'm going to mark as
15 Exhibit 2, U.S. Patent No. 5,019,375, Tanner, et
16 al., that's referenced there.
17 MS. JEFFRIES: So, Dr. Lochhead, you won't
18 have this paper copy. This is not something
19 that's in the record as far as I'm aware. So you
20 will -- if you can, use the chat feature here to
21 see this patent.
22 Q Yeah, let me know if you have any issues
23 downloading it. It should be in the chat on the
24 Zoom?
25 MS. JEFFRIES: I'm not quite sure how

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1 to --
2 **A I've got it, yes.**
3 Q If you double click on it, it will open
4 up.
5 MS. JEFFRIES: Hang on. Mine is not
6 opening. Just give me a second. It's somehow
7 only wanting to download. I guess I have to
8 download it. Okay.
9 Q So, Dr. Lochhead, if you just match up the
10 numbers on this patent with the '915 patent
11 description we just looked at, can you confirm
12 that this is the Patent No. 5,019,375 to Tanner,
13 et al., that's mentioned in the '915 patent?
14 **A Yes, yes.**
15 Q Then you see in the upper left-hand side
16 of the -- I'll call this the '375 patent. The
17 assignee is the Procter & Gamble Company, right?
18 **A Yes.**
19 Q And this is one of the patents that the
20 '915 patent incorporates for optional materials
21 like antimicrobials that can be incorporated in
22 the '915 patent, right?
23 **A Yes.**
24 Q If you look at the abstract of the '375
25 patent, it refers to antiperspirant cream

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1 compositions, right?
2 **A It does, yes.**
3 Q Halfway down it says: They may be
4 formulated to have relatively high viscosities,
5 include volatile silicone material, a particulate,
6 antiperspirant active, a clay thickening agent, an
7 activator for the clay thickening agent, various
8 other materials. Right?
9 **A Yes.**
10 Q So, now, the '915 patent relates to
11 natural deodorants, right?
12 **A This '915 patent here?**
13 Q Yeah, I'm --
14 **A '915 patent?**
15 Q I'm switching back and forth.
16 **A Sorry.**
17 Q The '915 patent, it relates to natural
18 deodorant sticks, right?
19 **A Yes.**
20 Q So substantially free of silicones in at
21 least in some of the claims?
22 **A Substantially free of silicones and free**
23 **of aluminum, yeah.**
24 Q And in formulating those natural
25 deodorants, though, the inventors still looked to

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1 other references like the '375 reference that has
2 silicone material in it, right?
3 MS. JEFFRIES: Objection.
4 Mischaracterizes the document and the record.
5 **A I think what it actually says in the '915**
6 **patent, it says non-limiting examples include**
7 **emulsifiers, et cetera, et cetera, and so forth.**
8 **And examples of optional materials that are**
9 **described in, it doesn't -- that's actually what**
10 **it says, a non-limiting example.**
11 **Can you ask your question again, please?**
12 Q So the inventors of the '915 patent, in
13 formulating their natural deodorant sticks, they
14 still looked to references that relied on silicone
15 for the formulation?
16 MS. JEFFRIES: Objection. That's
17 mischaracterizing the document and the record.
18 **A They allude to other formulations to see**
19 **how to put other formulations together, and that's**
20 **what a POSA does. They notice a particular area**
21 **and they look at other formulations to see how to**
22 **put them together. And what they use -- they**
23 **would also know what not to use.**
24 Q Right. But one of the references with
25 other formulations had silicone in the

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1 formulations; and that didn't exclude it from the
2 universe of references that a POSA would look to,
3 correct?
4 **A No, a POSA could look at -- a POSA is**
5 **being guided by in the patent, in the context of**
6 **the patent, it says you can look here, you can**
7 **look there. A POSA would know what to look at and**
8 **what not to look at.**
9 Q And I'll direct your attention, please, to
10 column 2 in the '375 patent, around line 2, 2 or
11 3. And the first full paragraph in column 2
12 refers to a patent number, the Nabial issued in
13 1984, and says that patent describes deodorant
14 sticks containing an antiperspirant active.
15 Do you see that?
16 **A Yes.**
17 Q And what does it mean for a deodorant
18 stick to contain an antiperspirant active?
19 **A I opined on this and "contains an**
20 **antiperspirant active" means it contains an**
21 **aluminum.**
22 (Deposition Exhibit Number 3 marked
23 for identification.)
24 Q I want to drop into the chat, you probably
25 have a hard copy, Exhibit 3, U.S. Patent

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1 No. 11,497,706. It's the '706 patent.
2 Let me know when you've got that up,
3 please.
4 **A I've got it.**
5 Q And you're familiar with this patent,
6 right, Dr. Lochhead?
7 **A Yes, I've read it.**
8 Q This is the '706 patent that's at issue in
9 one of the IPRs?
10 **A Yes.**
11 Q And the title of this patent is:
12 Antiperspirant and Deodorant Compositions, right?
13 **A That's right.**
14 Q And then in column 1, at the top it says:
15 Field of the Invention. It says: The present
16 disclosure relates to antiperspirant and deodorant
17 compositions and methods relating thereto.
18 Do you see that?
19 **A Yes.**
20 Q And that's an accurate description of the
21 field of this invention, right?
22 **A Yes.**
23 MS. JEFFRIES: Objection. Vague.
24 Q And then --
25 **A That's what it says. That's what it says**

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1 **in column 1, Field of the Invention.**
2 Q Then in -- if we stay in column 1, do you
3 see there's a section entitled Background of the
4 Invention, right?
5 **A I see that, yes.**
6 Q And then I'm going to read some language
7 from that section and ask you if it's out here.
8 So column 1, line 22, while aluminum is highly
9 effective as an active, there is consumer interest
10 in antiperspirants and deodorants that do not
11 contain aluminum.
12 Was that accurate?
13 **A There's consumer interest, yes, in**
14 **antiperspirants -- consumers, some consumers**
15 **are -- don't like aluminum. They don't want**
16 **aluminum in their products.**
17 Q Then the next sentence says: Consumers
18 are also seeking more natural products, complete
19 with fragrances that are mostly natural or
20 essential oil based. They are further seeking
21 products with lower irritation than they have
22 experienced with baking-soda-based products.
23 Were those sentences accurate?
24 MS. JEFFRIES: Objection. Vague.
25 **A That's what the patent tells us. And yes,**

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1 **I've seen -- generally I've seen people who have**
2 **said those things. I've seen references to people**
3 **who are seeking product with lower irritation.**
4 **And, yeah, I've seen that.**
5 Q Okay. And then if we go to line 33, still
6 in column 1, it says: And products formulated
7 with baking soda, which has a relatively high pH
8 and high water solubility, can increase
9 irritation, even for consumers with moderate sweat
10 rates. Highly water soluble alkaline powders
11 contribute negatively toward natural or essential
12 oil stability as well, especially in a hot process
13 needed to melt waxes.
14 Was that accurate?
15 **A Can we take this one at a time?**
16 Q Sure. Yeah.
17 **A Products formulated with baking soda with**
18 **a relatively high pH can increase irritation, yes,**
19 **I've seen reference to baking soda increasing**
20 **irritation.**
21 **Highly water soluble alkaline powders**
22 **contribute negatively towards natural essential**
23 **oil stability, that's also correct. They can**
24 **interact with the essential oils and react with**
25 **the essential oils over time.**

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1 Q And then the last -- and high water
2 solubility powders can also lead to gritty
3 products as the water-soluble powders can
4 agglomerate when exposed to moisture released from
5 powders during the hot batch process.
6 Do you see that?
7 **A Yes.**
8 Q Was that accurate?
9 **A Well, that's what this patent tells us.**
10 **And it actually tells us again in the part that**
11 **was just looked at how to make it to avoid water,**
12 **you'll get gritty products.**
13 Q Okay. Now we're going to jump ahead to
14 column 10 of the '706 patent. That will be marked
15 as Exhibit 3.
16 **A Okay. I'm there.**
17 Q So line 31, it says: The present
18 invention may include one or more antimicrobial
19 compositions, and then it lists a number of
20 antimicrobials.
21 Do you see that?
22 **A Yes.**
23 Q And then in the next paragraph, it says:
24 In general, the total amount of antimicrobial used
25 in the present invention may be from .1 percent to

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1 about 30 percent by weight of the deodorant.
2 Do you see that?
3 **A Yes.**
4 Q Is that accurate and consistent with your
5 understanding of these inventions?
6 **A Yes, I've seen that. But generally, for**
7 **deodorants, it would be a much lower**
8 **concentration.**
9 Q Well, why would P&G say up to about
10 30 percent?
11 **A I don't know.**
12 Q And then it says specifically around
13 line 50, 49: Others could be as high as about
14 25 percent, such as if using magnesium hydroxide.
15 Do you see that?
16 **A Yes.**
17 Q And is that accurate?
18 **A Well, they're telling you that in the**
19 **patent, you could use up to 25 percent. To my**
20 **knowledge, up to my experience, generally much**
21 **lower levels of these kind of activities are used**
22 **in deodorants.**
23 Q Well, why was P&G saying you can use up to
24 25 percent?
25 **A I don't know.**

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1 Q Do you think they made a mistake?
2 **A I don't know. I don't think they made a**
3 **mistake, but I don't know why they put in those**
4 **concentration ranges.**
5 Q And you see in the list of antimicrobials,
6 line 35, for example, has magnesium hydroxide and
7 line 40 has baking soda and line 34 has zinc
8 carbonate.
9 Do you see those three?
10 **A Zinc carbonate, baking soda ...**
11 Q And magnesium hydroxide --
12 **A Partially carbonated magnesium hydroxide.**
13 **Is that what you're talking about in line 40?**
14 Q Line 35 has magnesium hydroxide.
15 **A Okay. I got it, yes.**
16 Q Just establishing that you see those three
17 antimicrobials listed.
18 **A Yes.**
19 Q Okay.
20 **A The antimicrobials, zinc carbonate,**
21 **magnesium hydroxide, and baking soda, right?**
22 Q Right.
23 Now let's turn to column 16, please, and
24 line 20.
25 **A Okay.**

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1 Q You see there's a section here with the
2 heading Antiperspirant Active?
3 **A Uh-huh.**
4 Q Okay. And if we jump down to line 40, it
5 says: The antiperspirant active for use in
6 anhydrous antiperspirant compositions of the
7 present invention may include any compound,
8 composition, or other material having
9 antiperspirant activity.
10 Do you see that?
11 **A Yes.**
12 Q Okay. And then the next sentence says:
13 More specifically the antiperspirant active may
14 include any of the antimicrobials discussed above
15 or may include a stringent metal salt, especially
16 inorganic and organic salts of aluminums,
17 zirconium, and zinc as well as mixtures thereof.
18 Do you see that?
19 **A Yes.**
20 Q And is that accurate?
21 **A Well, what it's telling you is if you're**
22 **making an antiperspirant, you need to add**
23 **stringent aluminum salt or aluminum zirconium**
24 **complex. You can add other antimicrobials, but**
25 **you must have aluminum.**

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1 Q Let's take a closer look at the sentence.
2 It doesn't say you must have aluminum, right?
3 **A A POSA would understand that you have to**
4 **have aluminum. It's not an antiperspirant if it's**
5 **not aluminum.**
6 Q Well, line 45 uses the word "or." It
7 doesn't say "and you must have aluminum." It says
8 the antiperspirant actives may include any of the
9 antimicrobials discussed above or may also include
10 a stringent metallic salt, especially, and it
11 continues to mention aluminum and zinc salts.
12 Right?
13 **A And as I said, as a POSA, I would**
14 **understand aluminum is necessary, it's essential**
15 **if you're making an antiperspirant.**
16 Q Why --
17 **A That's -- in this country, you can't make**
18 **an antiperspirant if it doesn't contain aluminum**
19 **or aluminum zirconium because antiperspirants are**
20 **drugs.**
21 Q Why would P&G use the word "or" and say it
22 may include antimicrobials or aluminum?
23 **A I don't know.**
24 Q Why would P&G say it could include zinc
25 salts?

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1 **A I don't know. I could guess they're**
2 **saying you could include it. Of course you can**
3 **include it. But you have to have aluminum there.**
4 **And you can add other things. You can include it,**
5 **and that's what it says. You can include it. You**
6 **can include lots of things.**
7 Q But just to be very clear, the patent does
8 not say you must have aluminum and you may include
9 other things. It says you may include
10 antimicrobials, aluminum salts, or zinc salts,
11 correct?
12 **A But a POSA would understand if you're**
13 **talking about an antiperspirant, it has to have**
14 **aluminum.**
15 Q Well, I understand your position. But I
16 just want to be very clear about what P&G said in
17 its patent, sir, so --
18 **A You know, it's not just what P&G says.**
19 **It's how does a POSA read it. If I'm a person of**
20 **ordinary skill in the art, I would understand you**
21 **have to have aluminum. And what this is telling**
22 **you is you can include those other antimicrobials,**
23 **and all it's saying you can include them. And**
24 **then you can include all sorts of aluminum salts,**
25 **but we know you have to have aluminum. It's not**

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1 **an antiperspirant if it doesn't have aluminum or**
2 **an aluminum complex.**
3 Q But just to be very clear, the patent
4 doesn't expressly say that?
5 MS. JEFFRIES: Objection. Asked and
6 answered.
7 **A It doesn't have to because a POSA would**
8 **understand that.**
9 Q Okay. But it's not there, right, in the
10 language of the patent?
11 **A It says -- let's read this. It says that**
12 **these can be included. They may include any of**
13 **the antimicrobials discussed above. It doesn't**
14 **say only them. It does say, it says they may**
15 **include. But a POSA would know to be an**
16 **antiperspirant, it has to have aluminum, so ... it**
17 **say "may include." It doesn't say they're the**
18 **antiperspirant, the only antiperspirant active.**
19 Q I want to -- you -- if we jump to the
20 claims of the '706 patent on the last page, are
21 you there?
22 **A Yes.**
23 Q And you opined on written description
24 support for some of these claims, specifically
25 claims 16 to 23, right?

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1 **A I think so. Can I see my report to make**
2 **sure that --**
3 Q Yeah, refresh yourself with your report.
4 **A Yeah, check things here. Okay. Claims 16**
5 **to 23, yes. I've got one paragraph that says**
6 **this.**
7 Q Okay. So in your view, these claims have
8 adequate support in the priority application,
9 which is -- we refer to as the '647 patent, right?
10 **A Yes, that's what I said in the**
11 **second-to-last page of my -- the third-to-last,**
12 **page 71, I said it.**
13 (Deposition Exhibit Number 4 marked
14 for identification.)
15 Q I put -- you probably have a hard copy,
16 but I put the '647 patent in the chat. We'll mark
17 it as Exhibit 4, and I'd like to discuss the
18 support for these claims in the '647 patent.
19 **A '647 patent. I'm trying not to get the**
20 **documents all mixed up. Okay. I have the '647**
21 **patent.**
22 Q Let's focus on claim 16 in the '706
23 patent --
24 **A '706 patent, okay.**
25 Q Yeah, just keep them both in front of you

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1 because we're going to be going back and forth.
2 **A Okay.**
3 Q Okay. So we'll start with stearyl
4 alcohol. And in the '647 patent, can you show me
5 where the patent tells a POSA -- gives a POSA a
6 reason to use stearyl alcohol specifically in this
7 claim combination of ingredients? And you can
8 point me to whatever you need to, but I'll direct
9 your attention specifically to claim 16 of the
10 '647 patent. And I'll note that line 9 to 10
11 mentions stearyl alcohol as a non-limiting example
12 of a suitable primary structurant.
13 So the question again is: Where in the
14 '647 patent does it give a POSA a reason to use
15 stearyl alcohol specifically in this combination
16 of ingredients that form the deodorant?
17 MS. JEFFRIES: I'm just going to object as
18 vague. But maybe, Josh, I misunderstood
19 something. You referenced claim 16 of the '647.
20 MR CALABRO: Of the '706. I misspoke.
21 MS. JEFFRIES: Maybe you could --
22 Q Where in the '647 patent does it provide a
23 POSA a reason to use stearyl alcohol specifically
24 in the combination of ingredients as in claim 16
25 of the '706 patent?

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1 **A Yes. Again, it says non-limiting examples**
2 **include stearyl alcohol, beeswax, for example.**
3 **And earlier on, it described what -- the property**
4 **of the structurant you're looking for, and then**
5 **later it tells you how to use them. So basically,**
6 **yeah, it tells a person of ordinary skill in the**
7 **art that they could use stearyl alcohol in this**
8 **invention and use it in the way it's described to**
9 **get the result that the patent claims.**
10 Q But what would the POSA's rationale be for
11 distinguishing stearyl alcohol from the other
12 listed structurants? Like you mentioned beeswax,
13 for example? Why is the POSA going to pick
14 stearyl alcohol over beeswax or any of the others?
15 MS. JEFFRIES: Objection. Incomplete
16 hypothetical and misleading.
17 **A Well, what the patent says is you can use**
18 **these, if you use them the way the patent**
19 **describes them, and it leads a -- a POSA would**
20 **understand they could use the stearyl alcohol, if**
21 **it has the right properties, put it in there. Or**
22 **beeswax so they've listed -- they've actually**
23 **directed to what structurant is available. And,**
24 **of course, if there are other structures that**
25 **don't appear on this list, they haven't directed**

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1 **attention to them.**
2 Q So a POSA would understand that beeswax or
3 stearyl alcohol could be -- could both be used and
4 they could be used interchangeably?
5 MS. JEFFRIES: Objection.
6 Mischaracterizes testimony.
7 **A No, I don't think they could be used**
8 **interchangeably. They could both -- they could**
9 **each be used. They could each be used in the way**
10 **that's described and to get the desired stick.**
11 **And what the POSA would do would take -- they've**
12 **identified that stearyl alcohol as a potential**
13 **structurant. It's showing you how to use it, and**
14 **a POSA would put it together and get the expected**
15 **result.**
16 Q And claim 16 of the '706 patent also
17 mentions beeswax, which we've talked about in the
18 context of the '647 patent. And where in the '647
19 patent does it tell a POSA to use stearyl alcohol
20 and beeswax in the same composition?
21 **A Well, stearyl alcohol and beeswax are both**
22 **listed as structurants, and the POSA would have**
23 **the option of using both of them in a**
24 **composition --**
25 Q Is there --

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1 **A -- individual ones in the composition to**
2 **get the result.**
3 Q Is there any reason the POSA would use
4 both?
5 MS. JEFFRIES: Objection.
6 **A The reason is there -- that they're giving**
7 **here as examples of structurants that could be**
8 **used and the patent tells them how to use it.**
9 Q And where in the patent does it tell them
10 how to use stearyl alcohol and beeswax?
11 **A In which patent are you talking about?**
12 **'706?**
13 Q '647. The specification is the same, but
14 '647. Where does it tell the POSA how to use
15 stearyl alcohol and beeswax together?
16 **A In column 19 and 20, method of making.**
17 Q But these don't relate to the stearyl
18 alcohol and beeswax combination specifically,
19 right?
20 **A Yes, they do. They write to primary**
21 **structurants, and beeswax and stearyl alcohol are**
22 **listed as primary structurants.**
23 Q Well, why doesn't the patent give guidance
24 on which ones to select and how precisely to
25 combine them? Wouldn't that be difficult for a

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1 POSA?
2 **A No, no. A POSA reading the method of**
3 **making would know how to -- would understand how**
4 **to make it. And then you would look and say what**
5 **structurants can I use, and that's when you would**
6 **look at the possible structurants you could use,**
7 **and you would then try those structurants.**
8 Q And how would he go about choosing the
9 ones to try?
10 **A Well, the patent tells him which ones --**
11 **it's got a list of the ones you can try here, and**
12 **he could choose which ones to try and put it in**
13 **the method of making.**
14 Q Wouldn't it be difficult for a POSA to
15 pick from the list of possible structurants to
16 arrive at a structurant or combination of
17 structurants that's actually going to work?
18 **A I don't think it would be difficult**
19 **because you're told which structurants -- which**
20 **structures to choose and how to put them together**
21 **to make it work.**
22 Q And by "work," what do you mean?
23 **A To make an acceptable deodorant stick.**
24 Q And the POSA is going to use his or her
25 own experience to determine the precise amounts of

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1 the structurants to use, correct?
2 MS. JEFFRIES: Objection.
3 Mischaracterizes testimony.
4 **A No, I don't think so. I think the**
5 **patent -- the '647 actually somewhere tells you**
6 **that the range of weights of structurant and other**
7 **things you can use and also gives -- yeah. It**
8 **also gives an example of, in Table 4, of the types**
9 **of concentrations that could be used, but it also**
10 **gives range.**
11 Q So let's -- let's go back to the '706
12 patent and look at the ingredient D, magnesium
13 hydroxide, right, in claim 16?
14 **A Hang on a second. Just got my papers**
15 **mixed up. Yes, '706, where are you asking me to**
16 **go?**
17 Q '706, claim 16, do you see ingredient D is
18 magnesium hydroxide?
19 **A Yes.**
20 Q Okay. And if you flip back to the '647 --
21 **A Okay.**
22 Q -- and column 11 near the bottom, there's
23 a section E, antimicrobial activity?
24 **A Yes.**
25 Q Okay. And I'll read some of this text:

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1 Table 2 below shows raw material microbial
2 inhibition concentration data tested against two
3 key underarm bacteria strains. As can be seen,
4 the first three listed antimicrobials -- lupamin,
5 hexamidine, and piroctone olamine -- perform
6 particularly well against the bacteria as raw
7 materials. Also performing well as raw materials,
8 and there's a few others, one, two, three, four,
9 five, six, seven others, I'm not going to
10 pronounce them all, and it says: Also performing
11 moderately well against the bacteria as raw
12 materials were magnesium carbonate and magnesium
13 hydroxide and calcium carbonate.
14 Do you see that?
15 **A Yes.**
16 Q So how does the '647 patent tell a POSA to
17 use magnesium hydroxide specifically as an
18 antimicrobial in the '706 patent, claim 16's
19 combination?
20 MS. JEFFRIES: Objection.
21 Mischaracterizes the record and the law.
22 **A Well, it shows -- in the Table 2**
23 **especially it shows -- first of all, it says what**
24 **can be used. And then it shows in the table what**
25 **are effective, which of these are effective**

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1 **against the particular bacteria, the strains that**
2 **give rise to underarm odor.**
3 **And the -- so it shows that -- which of**
4 **these -- basically you could choose any of the**
5 **ones that are shown. But then there are other**
6 **considerations that you need to take into**
7 **consideration. For example, irritation. You know**
8 **that some of them may -- if you know that some of**
9 **them may irritate, a POSA would not use them. So**
10 **if they've got the right antimicrobial activity,**
11 **that's not a stand-alone thing. A POSA would say,**
12 **well, I need to take things that are not an**
13 **irritant as well, for example.**
14 Q So what would be the rationale for
15 distinguishing magnesium hydroxide from the other
16 listed antimicrobials, including ones that perform
17 better like piroctone olamine?
18 MS. JEFFRIES: Objection. Asked and
19 answered. Incomplete hypothetical.
20 **A Formulation considerations, availability,**
21 **regulations. These are the kind of things that a**
22 **POSA would have to take into consideration when**
23 **they're making these things. The patent tells you**
24 **these things can be used and how to use them, but**
25 **there are other requirements that a POSA would**

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1 **know of, things like regulation spectra and what**
2 **they're going to use and what they're not going to**
3 **use.**
4 Q You mentioned formulation considerations.
5 What formulation considerations would a POSA know
6 of that would inform a POSA's decision?
7 **A Are these things liquid or solid? How to**
8 **add them. You're actually given the instructions**
9 **on how to make the thing, but that's -- normally**
10 **that's what a POSA would do, you look and say,**
11 **well, what are the physical characteristics or**
12 **chemical characteristics. Would you expect to get**
13 **an interaction between the ingredient, for**
14 **example.**
15 Q And a POSA would know all this?
16 **A Yeah, a POSA is making this stuff -- a**
17 **POSA would understand what to -- they might not**
18 **know from the top of their head, but they'd know**
19 **where to find it. They'd know where to look.**
20 Q And turn back, please, to the '706, claim
21 16. You see there's sunflower seed oil and jojoba
22 seed oil as the last two ingredients there.
23 **A Jojoba seed oil and sunflower seed oil,**
24 **yes.**
25 Q Flip back, please, to the '647 patent,

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1 column 18, and lines -- in column 18, lines 41 to
2 44, this is discussing consumer preferred
3 emollient being liquid triglyceride. It goes on
4 to list a bunch of additional emollients that may
5 be used. And then on line 44, specifically it
6 mentions sunflower seed oil and jojoba seed oil,
7 right?
8 **A Yes.**
9 Q And what would be the basis, a POSA's
10 basis for choosing those two as opposed to any of
11 the others, say avocado oil, canola oil, or
12 anything else that's listed there?
13 **A Differences in cosmetic attributes. So**
14 **the POSA would say here's the list of emollients I**
15 **can use, which ones will I use, and what are the**
16 **cosmetic attributes in choosing that. And then**
17 **I'd fit it into the formula as expected. I'd be**
18 **looking for different things. For example,**
19 **sunflower seed oil oxidizes much more readily than**
20 **jojoba oil, and that's something you'd have to**
21 **take into consideration depending on your**
22 **application. Other cosmetic attributes, you take**
23 **that into consideration. And a POSA would know**
24 **what cosmetic attributes they're looking for.**
25 Q But to make the combination that's in

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1 claim 16 of the '706 patent, which has eight or
2 nine different ingredients, wouldn't the POSA need
3 guidance on that specific combination?
4 MS. JEFFRIES: Objection. Vague.
5 Incomplete hypothetical.
6 **A The question is to meet that specific**
7 **formulation?**
8 Q Yeah.
9 **A If a POSA was given that particular**
10 **formulation and the instructions on how to make**
11 **it, they could make that particular formulation.**
12 **But in looking at the formulations that are**
13 **possible in the context of the written description**
14 **of the patent, a POSA would also know to look at**
15 **the context of the patent and say what other**
16 **things are available, and the patent would tell**
17 **them.**
18 Q And would different POSAs get to different
19 combinations of ingredients in different
20 concentrations?
21 MS. JEFFRIES: Objection. Incomplete
22 hypothetical. Misstates the law.
23 **A I don't understand your question. Sorry.**
24 **Could you ...**
25 Q So for written description, the POSA

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1 doesn't have this claim 16 in front of him or her.
2 So I'm asking why -- wouldn't the POSA need some
3 guidance in the written description in the '647
4 patent on those specific -- on that specific
5 combination, like here's how to combine these
6 eight or nine ingredients in these amounts to make
7 a deodorant? Wouldn't a POSA need more guidance
8 on how to do that, how to make that specific
9 combination and the amounts that are required?
10 MS. JEFFRIES: Object that it calls for
11 legal conclusion.
12 **A I'm still not sure what you're asking.**
13 **Sorry. Could you say it some other way? You're**
14 **asking a POSA, they need to make that specific --**
15 Q Yeah, so to arrive --
16 **A -- that specific formulation.**
17 Q To arrive -- you see claim 16 has eight or
18 nine different ingredients listed out in a
19 combination, right?
20 **A Uh-huh.**
21 Q And these ingredients are each separately
22 identified in the '647 patent, but they're not
23 combined into a single formulation, right?
24 **A Right.**
25 Q So wouldn't -- wouldn't -- to make the

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1 '706 formulation, wouldn't a POSA need that kind
2 of guidance? Like, wouldn't the POSA need the
3 '647 patent to identify this particular
4 combination in the particular amounts of each of
5 these ingredients that the formulation requires?
6 MS. JEFFRIES: Just object as calling for
7 a legal conclusion and misstating the law.
8 **A No. To make that particular -- if the**
9 **POSA had the instructions in the '706 patent and**
10 **the formulation -- and the claim, they could put**
11 **those things together to make that. Going from**
12 **the '647, they're given the choice of materials to**
13 **use. They're switching from one patent to**
14 **another. The materials are here. They're given**
15 **the choice of using those materials, and they're**
16 **taught how to do it. And that's how they actually**
17 **develop a formulation that became a claim.**
18 Q And that's essentially what I'm asking.
19 So a POSA, in my question, doesn't have the '706
20 claim with all those ingredients listed in the
21 combination; he or she just has the '647 patent
22 disclosure. And is the listing of those
23 ingredients enough for the POSA to get to a
24 formulation in the '706 patent claim?
25 MS. JEFFRIES: Objection. Asked and

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1 answered. Same objections as earlier as well.
2 **A Yeah, I'm having trouble understanding**
3 **your question. But yeah. If you're given the**
4 **claim and the instructions, you can follow and**
5 **make that -- and use that claim. If you're not**
6 **given the claim but you're following the context**
7 **of the patent, a formulator may or may not come up**
8 **with that exact formulation. But what they do is**
9 **come up with a formulation. I think that's the**
10 **question you were asking. I'm not sure.**
11 (Deposition Exhibit Number 5 marked
12 for identification.)
13 Q I'm going to mark as Exhibit 5, I'm going
14 to drop it in the chat. You probably already have
15 it, U.S. Patent No. 11,433,018. I haven't been
16 tracking the time, but just let me know if you
17 need a break.
18 MS. JEFFRIES: Yeah, it's been over an
19 hour. The next convenient time, whenever, if
20 you're switching topics, now would probably be a
21 good time. Or if you want to continue, as long as
22 Dr. Lochhead is okay.
23 **A Yeah, I'm just separating -- I've got my**
24 **papers mixed up again.**
25 MR. CALABRO: I'm going to switch topics,

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1 so why don't we take 10 minutes or 15, whatever
2 you need.
3 MS. JEFFRIES: Okay. Sounds good. Thank
4 you.
5 (A short break was taken.)
6 Q Dr. Lochhead, pull up what I marked as
7 Exhibit 5, please, U.S. Patent No. 11,433,018. I
8 think this is Exhibit 1003 from the IPRs.
9 **A Got it.**
10 Q Okay. And you recognize this as the
11 Lesniak reference that's at issue in the IPRs,
12 right?
13 **A I do.**
14 Q And let's start with the abstract on the
15 front page of Lesniak. And you see here, Lesniak
16 provides an overview of his invention, right? Or
17 her invention, I'm not sure.
18 **A Yes, yes.**
19 Q And it's an anhydrous personal care
20 composition comprising, and then it lists four
21 ingredients, (a), (b), (c), and (d), right?
22 **A Yes.**
23 Q Okay. And so let's just check off these
24 ingredients: (a) is 45 to 60 percent by weight of
25 at least one ester selected from a group that

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1 includes triglycerides, right?
2 **A That's right, diglycerides and**
3 **monoglycerides.**
4 Q Sure. (b) is a first wax having a melting
5 point from 35 degrees C to 75 degrees C. That's
6 in an amount of 5 to 25 percent by weight, right?
7 **A Yes.**
8 Q And (c) is a second wax having a melting
9 point of 73 to 90 degrees C present in an amount
10 of .5 to 15 percent by weight. Right?
11 **A That's right.**
12 Q And then finally (d), the fourth
13 ingredient is at least one plant oil having a
14 certain saponification value in the amount of 5 to
15 35 percent weight, right?
16 **A Yeah, it specifies a saponification value,**
17 **yes.**
18 Q Okay. And then go to column 5, please.
19 **A I'm there.**
20 Q And then in line 33, it says: Therefore,
21 in one aspect, there is provided an anhydrous
22 personal care composition comprising, and then it
23 lists (a), (b), (c), (d), the four ingredients we
24 just looked at in the abstract, right?
25 **A Which -- where in column 5? Sorry. I've**

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1 **lost it.**
2 Q No worries. Line 32 or line 33. I just
3 want to confirm that the inventive composition
4 they're talking about here has the four
5 ingredients we were just looking at in the
6 abstract?
7 **A One ester selected from one triglyceride,**
8 **yeah. Yes, it's got these four ingredients.**
9 Q Okay. And then in the next paragraph,
10 when it's talking about that composition, it says,
11 starting at line 49: The present inventors have
12 surprisingly found that in addition to having good
13 micro-robustness, such compositions have reduced
14 greasiness and improved after feel, such as
15 reduced tackiness and drag on the skin as
16 compared --
17 **A Wait, wait, where are we looking?**
18 Q Line 49 in column 5. It's right below the
19 paragraph.
20 **A I thought you said column 6.**
21 Q I may have. It's line 49, column 5. Are
22 you with me?
23 **A Yes.**
24 Q So it's beneath the paragraph we were just
25 looking at that had the compositions with the four

80

1 ingredients. And it says: The present inventors
2 have surprisingly found that in addition to having
3 good micro-robustness, such compositions have
4 reduced greasiness and improved after feel, such
5 as reduced tackiness and drag on the skin as
6 compared to other anhydrous compositions. Such
7 compositions are also physically stable at high
8 and low temperatures.
9 Do you see that?
10 **A Yes.**
11 Q So, here, Lesniak is at least reporting
12 his compositions we looked at are physically
13 stable at high and low temperatures, right?
14 **A He's saying those compositions are stable**
15 **at high and low temperatures. But, of course, in**
16 **another place, he actually points to ones that are**
17 **stable, which are stable and which are unstable.**
18 Q And we'll get there. At least here, he's
19 reporting these compositions are physically stable
20 at high and low temperatures, correct?
21 MS. JEFFRIES: Objection.
22 Mischaracterizes the document.
23 **A Well, no, he's giving a general range.**
24 **And then he says they're stable. But later on he**
25 **says that in some cases, they became unstable.**

81

1 Q And we'll get there. And then it
2 continues: The present inventors have also
3 surprisingly found that the amount of white
4 residue remaining on the skin following
5 application of the composition is reduced when the
6 composition comprised a first wax having a melting
7 point of 35 to 72 degrees C and a second wax
8 having a melting point of 73 degrees C to
9 90 degrees C, right?
10 **A That's what it says, yes.**
11 Q Okay. And then still talking about the
12 same compositions: Present inventors have also
13 surprisingly found that such compositions are also
14 physically stable, i.e., do not exhibit separation
15 into a bulk solid portion and bulk liquid portion
16 when stored at 49 degrees C, zero percent
17 relatively humidity for a period of 13 weeks, and
18 was stored at 40 degrees C/75 percent relative
19 humidity for a period of 13 weeks and show
20 acceptable dispensing characteristics in addition
21 to being non-greasy. Right?
22 **A Yes.**
23 Q That's what he reports. And now on
24 column 7, line 22, it's referring to the waxes.
25 And it says: In certain embodiments the first wax

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1 is beeswax and the second wax is hydrogenated
2 castor oil.
3 Do you see that?
4 **A No. Where are we? Column 7, you said?**
5 Q Column 6, line 22.
6 **A Column 6 line 22, okay.**
7 Q In certain embodiments, the first wax is
8 beeswax and the second wax is hydrogenated castor
9 oil.
10 Do you see that?
11 **A Yes, yes.**
12 Q Now let's go to the table with the
13 stability testing, Table 2 in column 11. Are you
14 there?
15 **A Yes.**
16 Q Table 2. So here Lesniak tested 11
17 compositions, right?
18 **A Yes.**
19 Q And nine of them have an asterisk, right?
20 **A Yes.**
21 MS. JEFFRIES: Objection. Vague.
22 Q The asterisk denotes a comparative
23 composition, right?
24 **A It does.**
25 Q And two of the compositions do not have an

83

1 asterisk, right?
2 **A Yes.**
3 Q And those two compositions, without the
4 asterisk are the only two with hydrogenated castor
5 oil, which says Castorwax MP-80.
6 Do you see that?
7 **A That's right. It contained a small amount**
8 **of Castorwax.**
9 Q And Castorwax is identified by Lesniak as
10 a secondary wax with a higher melting point than
11 the first wax, right? In the same column 6, lines
12 16 to 23.
13 MS. JEFFRIES: Just objection.
14 Mischaracterizing the record and the document.
15 **A It just says the second wax has a melting**
16 **point of 77 to 85; second option, 73 to 83. It**
17 **doesn't say Castorwax.**
18 Q We just looked. It says in certain
19 embodiments, the first wax is beeswax and the
20 second wax is hydrogenated castor oil.
21 Do you see that?
22 **A Where?**
23 Q Column 6, line 22 to 23.
24 **A Yes, in second embodiments. Yes, in**
25 **second embodiments.**

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1 Q The first wax is beeswax, the second wax
2 is hydrogenated castor oil, right?
3 **A Yes.**
4 Q So then if we go back to the table, the
5 only two compositions that's a secondary wax with
6 a melting point in Lesniak's range are 8 and 11,
7 right?
8 MS. JEFFRIES: Objection. Vague.
9 **A Could you say the question again, please?**
10 **The only two ...**
11 Q Compositions with a secondary wax with
12 melting point within the ranges disclosed by
13 Lesniak are compositions 8 and 11?
14 **A The only two compositions with Castorwax**
15 **are 8 and 11 is present at 2 percent, yes.**
16 Q And 8 and 11 both passed all of Lesniak's
17 tests, including high temperature stability,
18 right?
19 **A Yes. As far as I know, so did all the**
20 **others, all the other compositions have all of**
21 **Lesniak's requirements. And what was the second**
22 **part of your question? Sorry. They're**
23 **compositions with the same ingredients, all of**
24 **them.**
25 Q Well, let's get to that. Which -- what is

85

1 the -- remember we looked at the four ingredients,
2 one of which is a second wax having a melting
3 point of 73 to 90 degrees C present in an amount
4 of .5 to 15 percent by weight. And where is the
5 second wax in all of the other compositions?
6 Which wax is it?
7 **A Could I have your question again, please?**
8 **I just want to make sure I get it right.**
9 Q Your answer was all the other compositions
10 have all of Lesniak's requirements. And my
11 question, though, was: Where in the nine
12 comparative examples is the secondary wax with a
13 melting point of 73 to 90 degrees C?
14 **A In these sunscreen compositions, only 8 of**
15 **the 11 contain Castorwax that I can see. And**
16 **Castorwax is ...**
17 Q And Castorwax is, according to Lesniak, a
18 second wax with a melting point within Lesniak's
19 range, right?
20 **A Castorwax is a second wax within the**
21 **range, yeah.**
22 Q And as far as you can tell sitting here,
23 the other comparative compositions did not have
24 such a second wax, correct?
25 **A All the compositions are beeswax, and only**

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1 **8 and 11 have two waxes. But the sunscreen, these**
2 **sunscreen compositions, only 8 and 11 have a**
3 **second wax.**
4 Q And those two were stable, the two with
5 the second wax, correct?
6 **A Yeah, those two compositions were stable.**
7 **They didn't separate into two phases. All the**
8 **rest separated into two phases when they did**
9 **testing, high-temperature testing.**
10 Q When you prepared your declaration, did
11 you think that all of the compositions in this
12 table had all of Lesniak's requirements for
13 ingredients?
14 **A Well, I looked at the differences between**
15 **the formulations, and there were very slight**
16 **differences between them, between the unstable and**
17 **the stable. Very slight differences.**
18 Q But did you not pick up on the Castorwax
19 difference?
20 MS. JEFFRIES: Objection. Vague and
21 argumentative.
22 **A I can't remember. I may or may not. I**
23 **noticed that all of them were -- eight or nine of**
24 **the 11 were unstable, and differences were very**
25 **slight. It was only a tiny amount of Castorwax.**

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1 **Of course the sunscreen compositions, sunscreen**
2 **lotions probably.**
3 Q These are not sticks?
4 **A There's nothing to say there are sticks.**
5 **I don't think they are sticks.**
6 Q And Lesniak discloses no instability data
7 on sticks, correct?
8 **A Lesniak doesn't. That doesn't say**
9 **anything about stability of sticks, much less**
10 **instability of sticks.**
11 Q Lesniak uses zinc oxide in his
12 compositions, correct?
13 **A Yes, Lesniak uses zinc oxide as a**
14 **sunscreen active and as a diaper rash active.**
15 Q Zinc oxide is also an antimicrobial,
16 correct?
17 **A Depending on who you talk to, it may or**
18 **may not be an antimicrobial.**
19 Q Does it have antimicrobial properties?
20 MS. JEFFRIES: Objection. Vague.
21 **A That is -- antimicrobial, it may have**
22 **antimicrobial properties against some microbes,**
23 **yeah, but ... in the context of this patent, it's**
24 **not an antimicrobial. It's a sunscreen active or**
25 **a diaper active, as we say. And a POSA would**

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1 **understand that.**
2 Q And do you have any evidence that the zinc
3 oxide in Lesniak's compositions lacked
4 antimicrobial properties?
5 **A Well, the patent doesn't tell me anything**
6 **about the antimicrobial properties of zinc oxide.**
7 **If you look at the patent, I don't know whether it**
8 **acts as an antimicrobial here or not or which**
9 **species of microbe it might be active against.**
10 Q Well, a POSA brings some background
11 knowledge to the patents, right?
12 **A Yes, of course.**
13 Q And a POSA would understand that zinc
14 oxide has antibacterial effects, correct?
15 MS. JEFFRIES: Objection. Vague.
16 **A In some cases, zinc oxide could be an**
17 **antimicrobial. In other cases, it may not be an**
18 **antimicrobial. In this patent, there's nothing to**
19 **tell the POSA that it's an antimicrobial.**
20 (Deposition Exhibit Number 6 marked
21 for identification.)
22 Q I'm going to mark as Exhibit 6, it's going
23 to take a minute to upload. Let me know when
24 you've got that. It looks like it's gone through
25 on my end.

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1 **A Which one?**
2 Q Exhibit 6. I don't think you'll have a
3 local, a paper copy.
4 **A Okay. Yes.**
5 Q You've got it?
6 MS. JEFFRIES: Just give me a second to
7 catch up. It's sort of loading on my end. I
8 don't know what's happening. It looks pretty big.
9 MR. CALABRO: It's big, so ...
10 MS. JEFFRIES: It looks like I can open it
11 now. Hang on one more second, sorry. Okay. I
12 have it open now.
13 Q Okay. Dr. Lochhead, do you recognize
14 Exhibit 6?
15 **A Yes.**
16 Q This is a book you edited, right?
17 **A It is, yes.**
18 Q And what's the title of the book?
19 **A Cosmetic Science and Technology,**
20 **Theoretical Principles and Applications.**
21 Q What was your role in editing this? What
22 did you do?
23 **A With the other three editors, we gathered**
24 **contributions. Well, first of all, we decided to**
25 **write a book, what should be in the book, what**

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1 **shouldn't be in the book. Recruited people that**
2 **could possibly write chapters, and people,**
3 **sometimes they selected or deselected themselves**
4 **because they didn't want to write. Then we put**
5 **the chapters together. And we had -- Elsevier**
6 **already asked us to do this. So once we put it**
7 **together, it went to Elsevier to say this is the**
8 **book. They sent the chapters to us, and each of**
9 **us edited the appropriate parts.**
10 Q And have you -- you've read this book?
11 **A Oh, yes.**
12 Q And you wrote a foreword to this book,
13 right?
14 **A I think so.**
15 Q It's on page -- let me find it. Page xi
16 or if you type xii into the PDF, it's page 13 of
17 857. Actually, that's your bio. Let me find your
18 foreword.
19 **A Foreword, yeah. Okay. I'm there.**
20 Q You've got it?
21 **A My foreword?**
22 Q Yeah, your foreword. Or preface, I should
23 say. And it's xvii. Are you there, page 19 of
24 857 in the PDF?
25 **A I'm there, xvii.**

91

1 Q The Second full paragraph says: At this
2 juncture there is a need to review the
3 state-of-the-art to mentor the next generation of
4 cosmetic scientists and to establish a starting
5 point for the forthcoming era of cosmetic science.
6 The purpose of this book is to address that need,
7 constitutes a comprehensive review with
8 contributions from some of the world's leading
9 cosmetic scientists.
10 Do you see that?
11 **A Yes.**
12 Q Is that accurate characterization of this
13 book?
14 **A Yes, that's why I wrote it. That's what**
15 **we were trying to do.**
16 Q Okay. And this book was published in
17 2017, right?
18 **A I think it was 2017, yes. I need to look**
19 **at the copyright to be sure. In 2016.**
20 Q And turn, please, to page 33 on my screen.
21 It's in Chapter 2, I believe, Section 2.4.3.3.1?
22 MS. JEFFRIES: So 33 of the PDF or 33 of
23 the --
24 MR. CALABRO: It's 53 of 857 in the PDF.
25 **A 2.4.3.1?**

92

1 Q Have you got it?
2 **A Studies and Emulsification --**
3 Q 2.4.3.3.1?
4 **A 2.4.3.1, it's not coming up. Yes, I've**
5 **got it.**
6 Q So in Adobe is 34 or 53 of 857?
7 **A It's page 30 of 857. 49 of 857.**
8 Q If you search Deodorant That Works in an
9 Instant, it comes up. Let me know.
10 **A Search?**
11 Q Deodorant That Works in an Instant. Have
12 you got it?
13 **A Who wrote this chapter? I can't remember.**
14 Q You can scroll up, if you want. Let me
15 know when you're ready for ...
16 **A Okay.**
17 Q Ready?
18 **A Now I'll go back to 2.4.3 -- it works --**
19 Q There you go, okay.
20 **A I'm not there yet. Okay.**
21 Q All right. So this section entitled
22 A Deodorant That Works in an Instant, begins: In
23 the 1980s, the main mechanism through which
24 deodorant products intended to combat body odor
25 were the usage of antiperspirants that prevent

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1 perspiration from the sweat glands. And I'll
2 pause there.
3 And what does it mean, again, for a
4 deodorant product to combat odors through the
5 usage of antiperspirants?
6 **A The perspiration, what this says it is**
7 **prevents perspiration from the sweat glands. And**
8 **what that means is that basically the**
9 **antiperspirants block the sweat glands, and these**
10 **are aluminum salts. And as far as we know, they**
11 **interact with the proteins that are in the sweat**
12 **and they block sweat glands and stop the sweat**
13 **from coming out.**
14 Q Okay. And then it also -- the sentence
15 continues to discuss other mechanisms:
16 Antimicrobials that inhibit the activities of
17 residential bacteria from degrading odorless sweat
18 and sebum-derived substances into odorous
19 compounds and masking offensive body odors using
20 citrus and floral fragrances, right? Those are
21 three mechanisms identified here, correct?
22 **A Well, it distinguishes antiperspirants**
23 **block sweat glands. Antimicrobials -- and so**
24 **antimicrobials inhibit residual bacteria and odor**
25 **of sweat, and then you can fragrance it. So**

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1 **you're talking about two different types of**
2 **products. One, an antiperspirant would be the one**
3 **that blocks the sweat glands and may do other**
4 **things. A deodorant would not block the sweat**
5 **glands.**
6 Q Well, the sentence says the main mechanism
7 through which deodorant products intended to
8 combat body odors were, and then it lists the
9 three things we just discussed, right?
10 **A Yeah, it's talking about a broad range of**
11 **products, include antiperspirants and deodorants.**
12 Q Right.
13 **A I didn't write this.**
14 Q You edited it, though, right?
15 **A I edited it. I rely on the experts on the**
16 **writing itself, yes.**
17 Q And are you not an expert in deodorants?
18 **A I -- yes, I'm an expert in deodorants.**
19 Q All right. And then the next paragraph
20 talks about a zinc oxide deodorant, right?
21 **A The next sentence?**
22 Q Next paragraph.
23 **A Next paragraph. My thing is not**
24 **scrolling. Oh. What page are we on? My thing**
25 **just jumped.**

95

1 Q I'm not sure how the pagination works on
2 your PDF, but we're on the same page we were just
3 looking at.
4 **A Let me do the search again. 2.4.**
5 Q A Deodorant That Works in an Instant.
6 **A Oh -- okay. And where are we now?**
7 Q All right. We just looked at the first
8 paragraph in that section. Now we're moving on to
9 the second paragraph. And my question was --
10 well, why don't you read that paragraph so you
11 know what I'm asking about?
12 **A After pinpointing, yeah?**
13 Q Yeah, that's where we are. Please read
14 that one.
15 **A After pinpointing short chain --**
16 Q You don't have to read it out loud. You
17 can just familiarize yourself with it.
18 **A I've read it.**
19 Q So this is discussing zinc oxide
20 deodorants, correct?
21 **A Yes.**
22 Q And it concludes with: This gave birth to
23 a consumer-friendly formulation with exceptionally
24 high deodorizing capabilities, right?
25 **A Yes.**

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1 Q Now, of the three mechanisms through which
2 deodorant products combat body odors that we
3 looked at in the preceding paragraph, do you know
4 which one the zinc oxide deodorant would be
5 practicing or using?
6 **A No. They propose if it's interacting by**
7 **stopping the short-chain -- by reacting with the**
8 **short-chain fatty acids.**
9 Q And what does that mean? What kind of
10 reaction is that?
11 **A Making it zinc salts of fatty acids from**
12 **the sweat.**
13 Q Is that a fourth type of mechanism, or is
14 it one of the three that we just looked at?
15 **A That's a good question because it could**
16 **be -- right at this moment, even today, we're not**
17 **sure where the fatty acids come from that cause**
18 **odor. And they may be because of bacterial**
19 **degradation, but they may not.**
20 Q Okay.
21 **A It could be it's just making that zinc**
22 **salts of the fatty acids.**
23 Q Let's jump to -- it's page 227 of the book
24 itself, of the PDF --
25 **A Can I say something else? Because I know**

97

1 **that this was something that was presented at**
2 **IFSCC, which is people presenting their research.**
3 **As far as I'm aware, this technology was never**
4 **ever practiced. It had problems, so that's what**
5 **the author told me later on.**
6 Q Okay. But the book that published with
7 you as an editor said it gave birth to a
8 consumer-friendly formulation with exceptionally
9 high deodorizing capabilities, just to be clear?
10 **A I was the editor, and he was the author.**
11 **I think he may have been the inventor, but I**
12 **remember in a subsequent meeting he told me no, it**
13 **never had been -- it had problems. I don't know**
14 **what the problems are. Sorry, where did you want**
15 **me to go?**
16 Q 227 of the book itself. It's --
17 **A I can search 227, can I?**
18 Q 227, see if that works, yeah, that will
19 bring you to the first page, the result.
20 **A Reference 227.**
21 Q Should be above that, I think. At least
22 it's -- well, actually, it's not the first. If
23 you search -- just keep scrolling down until you
24 hit page 227. The page number is in the upper
25 right-hand side. Like the fifth result --

98

1 **A It's not -- okay.**
2 Q Fifth result for 227 in my search.
3 **A I don't see page numbers. Where's the**
4 **page numbers?**
5 Q In the upper right or upper left.
6 **A Okay.**
7 MS. JEFFRIES: And not all the pages have
8 the numbers. Oh, I see they move around. It's so
9 long.
10 MR. CALABRO: Yeah, there's not a good way
11 to navigate, but we're almost done with this.
12 **A 231, okay. I'm backing up to 227.**
13 Q Let me know when you --
14 **A It just keeps jumping past the numbers.**
15 **It says I'm in 227 of 246. There's -- I think in**
16 **zinc oxide and a white powder, is that what you're**
17 **looking for, 4.3.1.2, zinc oxide?**
18 Q Go to the next page.
19 **A Okay. Yes.**
20 Q 227, okay.
21 MR. CALABRO: Andrea, let me know when
22 you're --
23 MS. JEFFRIES: I think I have it. We're
24 talking about 227 of the book, right.
25 MR. CALABRO: Of the book itself.

99

1 MS. JEFFRIES: Which is -- I think I'll
2 have the right page. We'll see once you ask
3 questions, but I think I have it.
4 Q All right. First sentence on 227 on my
5 screen is: Zinc oxide is also known to have skin
6 care effects.
7 Do you see that, Dr. Lochhead?
8 **A Yes, yes.**
9 Q And, for example, zinc oxide is reported
10 to have convergent effects that tighten the skin
11 to make pores less visible, antibacterial effects
12 that kill skin irritation and infection causing,
13 and it lists bacteria, and anti-acne effects.
14 Do you see that?
15 **A Uh-huh.**
16 Q Is that sentence accurate?
17 **A I'm sorry?**
18 Q Is that sentence accurate?
19 **A Well, I didn't write it. I just edited**
20 **it. But I presume that will kill staph and**
21 **pseudomonas. That's what it says.**
22 (Deposition Exhibit Number 7 marked
23 for identification.)
24 Q I'm going to mark as Exhibit 7, Patent
25 No. EP 0471392.

100

1 MS. JEFFRIES: So hang on one second.
2 We're done with the book for now?
3 MR. CALABRO: We can set the book aside.
4 Are you good? Anyone need a break?
5 MS. JEFFRIES: Maybe we should break for
6 lunch in the next 15 or 20 minutes or something.
7 MR CALABRO: Yeah, I think I can do this
8 one in 15 minutes, and then we'll break.
9 MS. JEFFRIES: Sure.
10 MR. CALABRO: If that works.
11 MS. JEFFRIES: I need to figure out where
12 the heck we are because I was struggling with the
13 book there. I got lost.
14 MR CALABRO: It's Exhibit 1072 from at
15 least two of the IPRs.
16 MS. JEFFRIES: 1072. Sorry for the
17 interruption.
18 MR. CALABRO: You've got your copies,
19 right?
20 **A I'm there.**
21 Q Okay. So you see this is a patent that's
22 assigned to Unilever, right?
23 **A I do.**
24 Q And do you recognize any of the inventors
25 from your time at Unilever?

101

1 **A Yes.**
2 Q Did you work with any of them?
3 **A Yes, Andy Park.**
4 Q Did you work with Andy Park on deodorants?
5 **A I may have. I can't remember. I may**
6 **have.**
7 Q Okay. And then you see in the little
8 abstract at the bottom on the first page, this
9 relates to deodorant composition, right?
10 **A Yes.**
11 Q And it has three ingredients. The first
12 one is an effective amount of a deodorant chosen
13 from salts or oxides of zinc or magnesium, right?
14 **A Yes.**
15 Q And if we scroll down to page 2, on the
16 bottom it says: Disclosure of the Invention, The
17 Deodorant. It says essentially the same thing we
18 just read: The composition according to the
19 invention comprises a deodorant which is chosen
20 from salts or oxides of zinc or magnesium, which
21 are insoluable or only sparingly soluble in water,
22 and then it provides some examples of those
23 deodorants, right?
24 **A Yes.**
25 Q One is, if you jump to -- yeah, no, it's

102

1 on the first page, magnesium hydroxide, line 52.
2 Right?
3 **A I just lost it. Sorry. Yeah, I got it,**
4 **magnesium hydroxide.**
5 Q And another one is zinc oxide, right?
6 That's the first one?
7 **A Another one is zinc oxide, yes.**
8 Q So magnesium hydroxide and zinc oxide are
9 both disclosed in this Unilever patent as suitable
10 deodorants, right?
11 **A They say you can use these salts as a**
12 **deodorant, meaning a deodorant active, yes.**
13 Q And then on the next page, first paragraph
14 talks about the amount of deodorant. Are you with
15 me? And it says --
16 **A I can't find it -- yeah, amount of**
17 **deodorant.**
18 Q Present at --
19 **A 1 to 15 percent composition, yes.**
20 Q So the amount of the deodorant, which
21 could be, for example, magnesium hydroxide or zinc
22 oxide, could go up to 20 percent by weight, right?
23 **A That's what you would add, yes.**
24 Q That's all I have on this one.
25 **A There's something else I'd like to say for**

103

1 **this one because I know this one well. In actual**
2 **fact, what we have here is when you look at the**
3 **stick, it's an aqueous core polyol stick, and that**
4 **zinc oxide in the stick would not be zinc oxide in**
5 **the zinc hydroxide because it would react with the**
6 **water in the aqueous polyol to form a zinc**
7 **oxide -- a zinc hydroxide, rather.**
8 Q And would the same be true of magnesium
9 oxide?
10 **A Yes. Magnesium oxide, yes.**
11 Q And yet the suitable deodorants that are
12 listed are magnesium oxide or magnesium hydroxide,
13 right?
14 **A Yes.**
15 Q So we can set that one aside.
16 **A In the formulation, these wouldn't be**
17 **present as oxides. They would be present as**
18 **hydroxides in that particular stick formulation**
19 **because it contains a lot of water.**
20 Q Right. And the patent doesn't teach the
21 POSA that, thought, right? The patent doesn't say
22 that?
23 **A The POSA would understand that, I think.**
24 Q And can you show me where the conversion
25 would take place?

104

1 **A Oh, if you look at the stick, look at this**
2 **so -- sorry, this isn't a stick. This is a**
3 **roll-on. I apologize, I'm thinking of another --**
4 Q Right. This is --
5 **A This is a roll-on. This isn't a stick at**
6 **all.**
7 Q Right. So it has zinc oxide as an active,
8 correct?
9 MS. JEFFRIES: Objection.
10 Mischaracterizes the document and the testimony.
11 **A I think it says that you could chose, a**
12 **POSA could chose a zinc oxide from this list.**
13 Q Right. But what you said about this being
14 an aqueous stick that would convert the zinc oxide
15 to zinc hydroxide, I just want to be clear, that
16 was not accurate?
17 **A It's not a stick. It's a roll-on.**
18 Q An aqueous stick. But it's not an aqueous
19 stick that converts the zinc oxide to zinc
20 hydroxide, correct?
21 MS. JEFFRIES: Objection. Compound.
22 **A It's not a stick and it's not an aqueous**
23 **stick. It's a roll-on.**
24 Q Well, if you look at the field of the
25 invention, it says it's, line 5, very first page

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1 of the patent, it's suitable for use as a cosmetic
2 stick?
3 **A But it doesn't tell you how to make the**
4 **stick. It doesn't say how to make the stick,**
5 **whether a stick -- the roll-on, the only thing**
6 **they show you are roll-ons. So they didn't --**
7 **there's no instructions here how to make a stick.**
8 Q What about example 1, that's a stick?
9 **A Is it? Sorry.**
10 Q Page 4 of the patent.
11 **A Oh. Oh, yeah, it's a stick with a**
12 **volatile silicon, yeah. And I knew there was**
13 **something -- I'm sorry. I got this mixed up with**
14 **another one. I'm not sure what I was thinking.**
15 **It has a volatile silicon. And 61 percent of**
16 **volatile silicon, which the major component is**
17 **volatile silicon, which changes all the**
18 **characteristics of the stick.**
19 Q Right. But I'm just focused on the zinc
20 oxide. That's not going to be converted to zinc
21 hydroxide?
22 **A The zinc carbonate in here.**
23 Q Right. But you said these sticks were
24 aqueous and would convert the zinc oxide to zinc
25 hydroxide?

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1 **A What I said is in the presence of water,**
2 **zinc oxide is converted to zinc hydroxide.**
3 Q And there's not water in this formulation,
4 right?
5 **A No.**
6 Q So you were mistaken about that, and
7 that's the last question?
8 **A Yes.**
9 Q All right. Why don't we take a break.
10 **A I'm getting it mixed up with another**
11 **patent, sorry.**
12 Q Okay.
13 **A The thing here is there's lots of volatile**
14 **silicon. So that stick is -- again, what I**
15 **remembered the stick was a different technology,**
16 **and it's a different technology.**
17 Q Thanks for the clarification.
18 MR CALABRO: Why don't we break now for
19 lunch, if that works for everyone.
20 (A lunch break was taken.)
21 Q Welcome back, Dr. Lochhead.
22 **A Thank you.**
23 Q Did you talk to anyone about your
24 testimony on the break?
25 **A No, had lunch.**

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1 Q Got it. How did you prepare your reports
2 in this case?
3 **A Well, lots of reading and discussion, and**
4 **then assembled the reports. And I worked with**
5 **counsel to finalize it, type the report, to get it**
6 **done.**
7 Q Did you write it up yourself?
8 **A Some of the things had my hand, I was**
9 **typing. But yeah, all the opinions and all the**
10 **concept is mine.**
11 Q Who did the first pass?
12 **A They did the legal construct, of course.**
13 **Sorry?**
14 Q Yeah, I'm sorry. Who did the first draft?
15 **A I did.**
16 Q You wrote up a first draft yourself?
17 **A Well, after lots of discussion, I put bits**
18 **and pieces together, yeah, and then we worked on**
19 **it.**
20 Q You were the one who physically typed up
21 the first draft?
22 **A I can't remember because, you know, it**
23 **came together like a jigsaw puzzle, if you like.**
24 **I typed a lot of it, yeah.**
25 Q Okay. Let's talk about hardness. The

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1 only hardness test that's mentioned in the claims
2 of the four P&G patents is ASTM D1321, correct?
3 MS. JEFFRIES: Objection. Vague.
4 **A It's a modification of D1321.**
5 Q Well, let's talk about the claims
6 themselves. And I can direct you to one, if you
7 need to. Why don't we look at claim 15 of the
8 '915 patent, which we marked as Exhibit 1. And
9 just focusing on the language of claim 15 --
10 MS. JEFFRIES: Make sure we're there.
11 Bob, do you have that one?
12 THE WITNESS: I've got it. I've got it.
13 MS. JEFFRIES: Okay. Great.
14 Q So it gives the hardness range of 8 to
15 14 millimeters, as we discussed. And then it
16 says: As measured by penetration with ASTM-D1321
17 needle.
18 Do you see that?
19 **A Yes.**
20 Q Okay. So the only test that's expressly
21 mentioned in the claim itself is ASTM D1321?
22 MS. JEFFRIES: Objection.
23 Mischaracterizes the document.
24 **A The claim has to be read in the context of**
25 **the patent, as you know. And having read the**

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1 **patent, someone would realize that the ASTM D1321**
2 **standard was modified, and that's common. It's**
3 **common for materials to modify a method to measure**
4 **what you're trying to measure, but you also --**
5 **it's also important that you tell people what**
6 **you've done, and they did that in here. They told**
7 **people exactly how it was measured.**
8 Q Uh-huh. And if we --
9 **A Again, in the written description, it**
10 **tells me how to do it.**
11 Q If we set aside the specification for a
12 moment and talk about the length of the claims,
13 can you point me to anywhere in the claims that
14 discloses a hardness test?
15 MS. JEFFRIES: Objection. Vague. It
16 mischaracterizes the record.
17 **A I don't understand you because I read the**
18 **claim in the context of the patent.**
19 Q What word in the claim -- what word or
20 words in the claim are you relying on for the
21 hardness test?
22 **A All of them. It tells you the hardness**
23 **range, the penetration, and what to do to get the**
24 **penetration. It tells you in a lot of detail in**
25 **the written description --**

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1 Q No, my -- I'm sorry. My question was
2 about the claim.
3 So point me to the language, please, in
4 the claim itself that you're relying on for the
5 hardness testing methodology. What words in the
6 claims themselves relate to or disclose that
7 method?
8 **A All of them. You know, and as far as I**
9 **understand, the claim has to be written in the**
10 **context of the written description. You can't**
11 **just take this claim by itself. I look at all the**
12 **words of that claim, it tells me the range, it**
13 **tells me the penetration, it tells me the stick,**
14 **it tells me measure with ASTM-D1321 needle, and I**
15 **go to the context and it tells me exactly how to**
16 **do that.**
17 Q And for context, you're referring not to
18 the claim itself, right?
19 MS. JEFFRIES: Objection.
20 **A I was taking the words of the claim and**
21 **telling you, use the words of the claim in the**
22 **context of the patent. Yeah, no, I was using the**
23 **words of the claim.**
24 Q And you think -- you opine that the
25 Bianchi references require an additional 50-gram

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1 weight to be used in connection with their tests,
2 right?
3 **A Can I look at where I say that, and can I**
4 **look at the Bianchi reference, please?**
5 (Deposition Exhibit Number 8 marked
6 for identification.)
7 MR CALABRO: I'm going to mark Bianchi
8 now. Bianchi '254, which is Exhibit 1008 in the
9 IPR, will be marked as Exhibit 8 in the
10 deposition.
11 MS. JEFFRIES: Dr. Lochhead asked for what
12 you were referencing when you said he said that.
13 Is there a particular one of his reports that
14 you're referencing?
15 **A Well --**
16 Q Dr. Lochhead, do you have that, or do you
17 want me to point you to something?
18 **A Yes, tell me what report you're**
19 **referencing.**
20 Q Let's see. The '706 report.
21 **A '706 report? Okay. Yes.**
22 Q So in paragraph -- let's go to
23 paragraph 38. Let me know when you're there.
24 **A Okay.**
25 Q It says in the last sentence: Like

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1 Bianchi '518, Bianchi '254 --
2 **A I'm not there yet. Where is it? 38?**
3 Q 38.
4 **A Of my report?**
5 Q Of your report for the '706 patent.
6 **A Which -- just 38?**
7 Q 38, last sentence.
8 **A I've got 38, paragraph 122.**
9 Q It's page 17.
10 **A Yes, I'm there.**
11 Q It says like Bianchi '518, Bianchi '254
12 discloses hardness values for its compositions as
13 measured using the DIN 51579 driven by a total
14 weight of 100 grams, rendering its composition
15 significantly harder than the claimed compositions
16 of the '706 patent.
17 Are you with me?
18 **A Yes.**
19 Q I marked as Exhibit 8 and dropped in the
20 chat, Bianchi '254 reference. You should have a
21 copy as well. It's Exhibit 1008 in the IPR.
22 **A 100 -- '254, I've got it.**
23 Q And my question is: What in Bianchi '254
24 are you relying on for the testing methodology
25 that includes a total weight of 100 grams?

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1 **A Well, it says here this stick hardness is**
2 **measured using a penetrometer Model HPT 7138 from**
3 **Precision. It comes with a 2.5-gram brass/steel**
4 **tapered needle, which is DIN 51-579. And we**
5 **already looked at 51-579 and found it's the same**
6 **as the ASTM 2139. And it tells you how the sticks**
7 **are equilibrated.**
8 **Then you take it as six different**
9 **locations, which is a slight deviation from the**
10 **method, which says measure in only four places,**
11 **and tells you where to take the measurements. And**
12 **the depth of needle penetration is recorded to the**
13 **nearest tenth of a millimeter.**
14 **Now, I then go to the DIN method, and the**
15 **method actually says that you have a 2.5-gram**
16 **needle and you add another 97.5 grams.**
17 **Can I have the method? The method, did I**
18 **give it to you?**
19 Q The method would be in your exhibits to
20 your report.
21 **A Yes, a method here... okay. On the method**
22 **I'm looking at EX 2019, page 2, and it tells me in**
23 **the method there, the weight of the test needle**
24 **should be 2.5 grams, minus .05 gram, and that's**
25 **the guide rod should be 97.5 grams plus or minus**

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1 **0.1 grams. And it actually says the guide rod**
2 **adjustable attachable weights of 50 grams, if you**
3 **want, another 50 grams. So it instructs me there**
4 **that the method is a guide rod of 97.5 grams,**
5 **penetration needle of 2.5 grams. So that's**
6 **100 grams.**
7 (Deposition Exhibit Number 9 marked
8 for identification.)
9 Q And now I'm going to mark Bianchi '518,
10 which is Exhibit 1006 in the IPR, I'm going to
11 mark that as Exhibit 9 for the deposition. Let me
12 know when you've got that.
13 **A I've got it.**
14 Q And it's the same question as I was asking
15 for the Bianchi '254 reference. Here I'd like you
16 to direct me to the disclosures that you're
17 relying on for your conclusion that Bianchi '518
18 hardness testing was done with a 100-gram total.
19 **A Okay. Yeah. This is what I was looking**
20 **for. Bianchi column 2, it's line 56 and**
21 **following, it tells you that you use penetration**
22 **according to ASTM D1321 at 177.5 for -- and what**
23 **that means to someone who's -- someone who's**
24 **skilled in doing penetration measurements, we**
25 **often report them as 100. That's the weight. 77**

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1 **is the temperature. 5 is for how long you allow**
2 **the needle to penetrate, so that's 5 seconds. So**
3 **that would be using ASTM D1321 with a 100-gram**
4 **weight. But that 77 degrees Celsius for**
5 **5 seconds. That tells someone how to do the**
6 **measurement.**
7 Q And you don't know for sure whether the
8 ranges disclosed in either of the Bianchi
9 references overlapped with the hardness ranges
10 claimed in P&G's patents, correct?
11 **A I know they can't be correlated because**
12 **they're two different methods. But what I do know**
13 **is that if you take the hardness ranges in the**
14 **Bianchi, the sticks are certainly much harder than**
15 **the P&G patent sticks.**
16 Q And there's no formulas for converting the
17 results from --
18 **A No, there's no formula.**
19 Q Okay. So -- and you haven't done any
20 testing to see whether the Bianchi and P&G
21 hardness results overlap, right?
22 **A No, I haven't done any testing, but --**
23 Q You can't say --
24 **A -- I relied on the ASTM method.**
25 Q So without any formulas and without any

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1 testing, you can't say for sure whether those
2 ranges overlap, right?
3 MS. JEFFRIES: Objection. Asked and
4 answered and vague. Go ahead, Bob --
5 Dr. Lochhead, you can answer, if you can.
6 **A I can look at the results and I see the**
7 **hardness testing, and that's what I looked at.**
8 Q Well, I mean, you agree Bianchi discloses
9 a hardness range of 7 to 14 and that -- those
10 numbers appeared in some of P&G's claims, right?
11 **A Yeah, it was a different method.**
12 Q Different method.
13 **A 70/14 with a 50-gram needle versus 70/14**
14 **with a 100-gram needle. 70/14 with a 100-gram**
15 **needle would be a much harder stick. If you look**
16 **at the results, which I can't find at the moment,**
17 **you'll see that the ones measured in the Bianchi**
18 **references are all -- they're right on the cusp,**
19 **which tells me you're using a heavier stick and**
20 **you still haven't penetrated all the way you**
21 **expect to.**
22 Q So my question is --
23 **A I can deduce that they're harder sticks.**
24 Q Fair enough.
25 My question is: Given the two ranges, 7

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1 to 14 using whatever you believe Bianchi to have
2 used and 7 to 14 using whatever you believe P&G to
3 have used, you don't know for sure whether those
4 ranges overlap?
5 MS. JEFFRIES: Objection. Asked and
6 answered and also vague. Mischaracterizing the
7 record.
8 **A I do know that if you measure with a**
9 **100-gram stick, the way Bianchi does, that if you**
10 **get the same material, it will penetrate much**
11 **further. I do know that the Bianchi reference**
12 **shows me much harder sticks. And if I look -- if**
13 **I look at where the measurements are, the 100-gram**
14 **penetrometer would drive it much further.**
15 Q And do you know whether the --
16 **A I can't give you the exact method, but I**
17 **do know I can deduce the Bianchi sticks are harder**
18 **sticks.**
19 Q Do you know whether the ranges overlap,
20 the 7 to 14 ranges?
21 MS. JEFFRIES: Objection. Asked and
22 answered. Mischaracterizing the documents.
23 **A There's two different methods, and I don't**
24 **know what the correlation is between those**
25 **methods. But I do know that the 50-gram needle**

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1 **wouldn't penetrate nearly as far as the 100-gram**
2 **needle. In the patent, of course, the 100-gram**
3 **needle goes almost the same height. So the**
4 **100-gram needle would be expected to go much**
5 **further if it was the Procter & Gamble sticks.**
6 Q Did you ask Procter & Gamble for any
7 results from hardness testing it had done?
8 **A No.**
9 Q Did you speak with any of the inventors
10 about how they performed the testing in their
11 patents?
12 **A No.**
13 Q And there's no conversion you know of to
14 convert between the Bianchi and P&G tests as you
15 see them, correct?
16 **A No.**
17 Q Okay. Before P&G's patents were filed,
18 had you personally conducted any hardness tests?
19 **A Yes, a long time ago.**
20 Q When was that?
21 **A Oh, I can't remember for sure. I can**
22 **remember peering at the needle quite a while ago.**
23 **Looking at a stick, the hardness method. This**
24 **hardness method is used for waxes, greases, all**
25 **sorts of things. I can remember looking at it.**

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1 Q By this hardness method, were you using
2 the D1321 method?
3 **A I was using the penetrometer method. I**
4 **can't say for sure it was D1321.**
5 Q And what were you remembering?
6 **A I can't remember. As I told you, I can**
7 **remember looking at the needle. I've done it on**
8 **occasion. I haven't done it routinely, but I've**
9 **done it occasionally.**
10 Q Have you done it on cosmetic sticks?
11 **A Yes.**
12 Q Okay. And so back when you were testing
13 this, hardness had been recognized as a property
14 that was important for cosmetic sticks?
15 MS. JEFFRIES: Objection. Vague.
16 **A Hardness and softness, yes.**
17 Q And someone skilled in the art like you
18 would have the desire to optimize the hardness,
19 right?
20 **A I don't know --**
21 MS. JEFFRIES: Objection. Broad. Vague.
22 Incomplete hypothetical.
23 **A Somebody like me would be trying to**
24 **formulate something that was acceptable and trying**
25 **to figure out how to measure that, how it was**

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1 **acceptable.**
2 Q And you had certain tools like a
3 penetrometer that would help you accomplish that,
4 right?
5 **A I don't have the penetrometer in my lab.**
6 Q No, I'm talking at the time when you were
7 doing this testing, you had certain tools at your
8 disposal like a penetrometer that you could use to
9 test the hardness and adjust it, right?
10 **A I used someone else's penetrometer.**
11 Q Fair enough. But there were tools in
12 existence that someone skilled in the art such as
13 yourself could adjust and test the hardness,
14 right?
15 MS. JEFFRIES: Objection. Incomplete
16 hypothetical.
17 **A They could measure. The tools are used to**
18 **measure the hardness. The formulator has to**
19 **adjust the hardness.**
20 Q Right. And a formulator like yourself
21 would have -- do you consider yourself a
22 formulator?
23 **A I'm somebody who stands behind -- I've**
24 **formulated before, but that's not my primary**
25 **function. My primary function is to be able to**

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1 **explain the science and the technologies to the**
2 **formulators and guide them.**
3 Q Okay. Let's use the term "POSA." You
4 consider yourself a POSA, right, for these
5 patents?
6 **A I think I'm more than a POSA. I think I**
7 **understand what a POSA would do. I've worked with**
8 **enough POSAs.**
9 Q So anyway, a POSA would have certain
10 know-how on how to adjust the hardness once it had
11 been tested to develop an acceptable cosmetic
12 stick?
13 MS. JEFFRIES: Objection. Incomplete
14 hypothetical.
15 **A Yeah, that's a very -- a very open**
16 **question you've asked me. Some individual had to**
17 **adjust the hardness. I don't know what they're**
18 **adjusting the hardness of.**
19 Q Sure. Well, maybe we can narrow it to
20 your testing. This is back before P&G patents.
21 You tested a stick for hardness, right?
22 **A Yes.**
23 Q With a penetrometer, right?
24 **A Yes, yes.**
25 Q What did you do with those results?

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1 **A I used them in combination with other**
2 **results to guide formulators towards something**
3 **that they wanted to make.**
4 Q Okay. Was there a hardness target for
5 these -- that these formulators gave you or you
6 gave to the formulators?
7 MS. JEFFRIES: Objection. Vague.
8 Irrelevant.
9 Q Sorry. I missed the answer.
10 **A I can't remember if there was a hardness**
11 **target. I just know we were measuring hardness.**
12 Q Was there a hardness acceptability
13 criteria?
14 MS. JEFFRIES: Same objections.
15 **A I can't remember if there was a hardness**
16 **acceptability.**
17 Q Was there a reason you tested hardness?
18 **A It was one of a variety of rheology tests**
19 **trying to understand what the composition would**
20 **do.**
21 Q Do you know how the formulators used the
22 hardness results that you gave them?
23 **A Part of the test, part of a routine number**
24 **of tests. Clear they were measuring -- they were**
25 **measuring the hardness of a stick because they**

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1 **didn't want it too hard or too soft.**
2 Q And if the stick came back as too hard or
3 too soft, would the formulators have been able to
4 do anything about that?
5 MS. JEFFRIES: Objection. Incomplete
6 hypothetical.
7 **A Well, remember, it's part of a variety of**
8 **tests. So all of these tests are helping to guide**
9 **the formulator to make a product, in this case, to**
10 **make a better product.**
11 Q Have you ever had a penetrometer in your
12 own lab?
13 **A No.**
14 Q How many times approximately have you
15 measured hardness with a penetrometer?
16 **A I don't know. Over 50-something years, I**
17 **don't know. Somewhere between 20 and a hundred**
18 **times, I guess.**
19 MS. JEFFRIES: Dr. Lochhead, I'll remind
20 you not to guess. I don't think counsel is
21 interested in your guesses. If you have an
22 estimate, that's great. But if you don't, you
23 don't need to guess. And you shouldn't.
24 **A I was guessing.**
25 Q You can give me your guess. I'm entitled

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1 to your --
2 MR. CALABRO: Stop coaching the witness,
3 Andrea.
4 MS. JEFFRIES: You're entitled to an
5 estimate, but you're not entitled to a wild guess.
6 So I don't think this matters. It doesn't matter
7 to me, but I'm just reminding the witness not to
8 be guessing.
9 MR. CALABRO: Oh, no, it matters.
10 Q Dr. Lochhead, for this case, you didn't do
11 any testing to confirm whether for a given stick,
12 it could fall both within the Bianchi range as you
13 interpret it and the P&G range as you interpret
14 it, correct?
15 MS. JEFFRIES: Objection. Compound.
16 Asked and answered.
17 Q Answer it again, please, Dr. Lochhead.
18 **A I didn't conduct any penetrometer tests in**
19 **this case.**
20 Q Before P&G's patents were filed, were you
21 generally aware if you add an ingredient like
22 beeswax to a deodorant stick, using more beeswax
23 would make the stick harder and using less beeswax
24 would make the stick softer?
25 MS. JEFFRIES: Objection. Incomplete

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1 hypothetical.
2 **A No, I was not. As I explained before, it**
3 **depends on the detail of the crystal structure and**
4 **how it's flocculated.**
5 Q So you didn't know that?
6 **A No, that's something you learn from the**
7 **methods. If I followed the methods that I knew**
8 **of, then I could get -- I could reproduce the**
9 **stick. But in the abstract, could I predict? No,**
10 **I probably couldn't predict.**
11 MS. JEFFRIES: Dr. Lochhead, I think you
12 do need to speak up a little bit louder. I'm not
13 hearing you. I'm not sure if the court reporter
14 can hear you.
15 THE WITNESS: Okay.
16 MS. JEFFRIES: And if you're getting a
17 little bit -- if you want to take a break, get
18 water, that's also fine.
19 THE WITNESS: In a few minutes, I'll need
20 to go to the bathroom.
21 MS. JEFFRIES: We can take a break in a
22 few minutes, that's no problem.
23 MR. CALABRO: Why don't we take a quick
24 break now.
25 MS. JEFFRIES: Okay.

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1 (A short break was taken.)
2 Q Dr. Lochhead, when were you first engaged
3 by P&G in connection with these patents?
4 **A I can't remember for sure, but I think it**
5 **was about 6 months ago.**
6 Q And what were you engaged for? What was
7 the scope of the engagement?
8 **A Again, I'd like to -- it's just not here.**
9 **I can't remember whether I was engaged to be a**
10 **consult at the time or just an expert. But I was**
11 **engaged to review and comment on the patent.**
12 Q And was it just in connection with these
13 IPRs?
14 **A Yes.**
15 MR. CALABRO: That's all I have for right
16 now. No further questions.
17 THE WITNESS: Okay.
18 MS. JEFFRIES: Okay.
19 (Discussion between the court reporter and
20 counsel regarding transcript orders.)
21 MS. JEFFRIES: So we'll do expedited. I
22 don't want to burden you. But tomorrow or the
23 next day. If you're doing expedited for the other
24 side, the same timing is fine for us. If you're
25 not, we'll just take it in, let's say, 2 days.

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1 MR. CALABRO: Yeah, we'll do the same, I
2 think, 2 days. I don't remember what I put down
3 but ...
4 THE COURT REPORTER: I can't remember
5 either. But 2 days will be Monday, if that's
6 acceptable with both of you.
7 MS. JEFFRIES: That's okay for me.
8 MR. CALABRO: That works for me.
9 (Witness excused, 2:21 p.m. Eastern.)
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1 ACKNOWLEDGMENT OF DEPONENT
2
3 I, DR. ROBERT LOCHHEAD, do hereby
4 acknowledge that I have read and examined the
5 foregoing testimony and the same is a true,
6 correct, and complete transcription of the
7 testimony given by me and any corrections appear
8 on the attached errata sheet signed by me.
9
10
11 _____
12 (SIGNATURE) (DATE)
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1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC
2
3 I, RACHEL F. GARD, Certified Reporter and
Notary Public within and for the States of
4 Illinois, Michigan, Indiana, and Nevada,
do hereby certify:
5
6 That DR. ROBERT LOCHHEAD, the witness whose
deposition is hereinbefore set forth,
7 was duly sworn by me before the commencement of
such deposition and that such deposition was taken
8 before me and is a true record of the testimony
given by such witness.
9
10 I further certify that the adverse party,
PROCTER & GAMBLE COMPANY, was represented by
11 counsel at the deposition.
12
13 I further certify that the deposition of
DR. ROBERT LOCHHEAD occurred remotely via Zoom,
14 on Wednesday, July 10, 2025, commencing at
9:32 a.m. to 2:21 p.m.
15
16 I further certify that I am not related to any of
the parties to this action by blood or marriage, I
17 am not employed by or an attorney to any of the
parties to this action, and that I am in no way
18 interested, financially or otherwise, in the
outcome of this matter.
19
20 IN WITNESS WHEREOF, I have hereunto set my
hand this 14th day of July, 2025.
21
22
23 Rachel F Gard
24 NOTARY PUBLIC IN AND FOR THE
25 STATES OF INDIANA AND MICHIGAN

A

able
37:2, 40:18, 46:8, 120:25, 123:3
about
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