

UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HYDRITE CHEMICAL CO.,	)
	)
Petitioner,	)
	)
-vs-	)
	)
SOLENIS TECHNOLOGIES, L.P.,	)
	)
Patent Owner.	)

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Case IPR2015-01586  
Patent No. 8,841,469

and

Case IPR2015-01592  
Patent No. 8,962,059

DEPOSITION OF DAVID A. ROCKSTRAW, Ph.D., P.E.

August 2, 2016

Chicago, Illinois

Page 2	Page 4
<p>1</p> <p>2</p> <p>3</p> <p>4 The deposition of DAVID A. ROCKSTRAW, Ph.D., P.E.,</p> <p>5 called by the Patent Owner for examination, taken</p> <p>6 before CORINNE T. MARUT, C.S.R. No. 84-1968,</p> <p>7 Registered Professional Reporter and a Certified</p> <p>8 Shorthand Reporter of the State of Illinois, at the</p> <p>9 offices of Quarles &amp; Brady, LLP, Suite 4000, 300</p> <p>10 North LaSalle Street, Chicago, Illinois, on</p> <p>11 August 2, 2016, commencing at 8:51 a.m.</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p>	<p>1 I N D E X</p> <p>2 DAVID A. ROCKSTRAW, Ph.D., P.E. EXAMINATION</p> <p>3 BY MR. LUCCI..... 5</p> <p>4</p> <p>5 E X H I B I T S</p> <p>6 SR EXHIBIT MARKED FOR ID</p> <p>7 No. 1 Supplemental Declaration of 5</p> <p>8 David A. Rockstraw, Ph.D.,</p> <p>9 P.E., U.S. Patent No. 8,841,469</p> <p>10 No. 2 Supplemental Declaration of 5</p> <p>11 David A. Rockstraw, Ph.D.,</p> <p>12 P.E., U.S. Patent No. 8,962,059</p> <p>13 No. 3 Alther reference 19</p> <p>14 No. 4 Atlas reference 23</p> <p>15 No. 5 original declaration of David 29</p> <p>16 A. Rockstraw, Ph.D., P.E.,</p> <p>17 U.S. Patent No. 8,841,469</p> <p>18 No. 6 original declaration of David 30</p> <p>19 A. Rockstraw, Ph.D., P.E.,</p> <p>20 U.S. Patent No. 8,962,059</p> <p>21 No. 7 Handbook of Cereal Science and 43</p> <p>22 Technology reference</p> <p>23 No. 8 Patent Owner's Response, 74</p> <p>24 Patent No. 8,841,469</p> <p>25 No. 9 Patent Owner's Response, 74</p> <p>26 Patent No. 8,962,059</p> <p>27</p> <p>28 No. 10 Decision IPR, Patent No. 74</p> <p>29 8,841,469</p> <p>30 No. 11 Decision IPR, Patent No. 75</p> <p>31 8,962,059</p> <p>32</p>
Page 3	Page 5
<p>1 APPEARANCES:</p> <p>2 ON BEHALF OF THE PETITIONER:</p> <p>3 QUARLES &amp; BRADY LLP</p> <p>4 300 North LaSalle Street, Suite 4000</p> <p>5 Chicago, Illinois 60654</p> <p>6 312-715-5107</p> <p>7 BY: CHRISTOPHER J. FAHY, ESQ.</p> <p>8 christopher.fahy@quarles.com</p> <p>9</p> <p>10 ON BEHALF OF THE PATENT OWNER:</p> <p>11 (via videoconference)</p> <p>12 BAKER &amp; HOSTETLER LLP</p> <p>13 Circa Centre, 12th Floor</p> <p>14 2929 Arch Street</p> <p>15 Philadelphia, Pennsylvania 19104</p> <p>16 215-568-3100</p> <p>17 BY: JOSEPH LUCCI, ESQ.</p> <p>18 jlucci@bakerlaw.com</p> <p>19</p> <p>20 REPORTED BY: CORINNE T. MARUT, C.S.R. No. 84-1968</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p>	<p>1 (WHEREUPON, certain documents were</p> <p>2 marked SR Exhibit No. 1,</p> <p>3 Supplemental Declaration of David</p> <p>4 A. Rockstraw, Ph.D., P.E., U.S.</p> <p>5 Patent No. 8,841,469, and No. 2,</p> <p>6 Supplemental Declaration of David</p> <p>7 A. Rockstraw, Ph.D., P.E., U.S.</p> <p>8 Patent No. 8,962,059.)</p> <p>9 MR. LUCCI: Whenever you want to swear the</p> <p>10 witness in.</p> <p>11 (WHEREUPON, the witness was duly</p> <p>12 sworn.)</p> <p>13 DAVID A. ROCKSTRAW, Ph.D., P.E.,</p> <p>14 called as a witness herein, having been first duly</p> <p>15 sworn, was examined and testified as follows:</p> <p>16 EXAMINATION</p> <p>17 BY MR. LUCCI:</p> <p>18 Q. Good morning, Dr. Rockstraw.</p> <p>19 A. Good morning, sir.</p> <p>20 Q. And you understand that this is your</p> <p>21 second deposition in connection with the IPR</p> <p>22 proceedings that are pending between Hydrite and</p> <p>23 Solenis?</p> <p>24 A. I understand.</p>

<p style="text-align: right;">Page 6</p> <p>1 Q. Dr. Rockstraw, I've had the Court 2 Reporter mark as Exhibit SR 1, for Supplemental 3 Rockstraw, to show this being distinguishable from 4 your first deposition, SR 1, a supplemental 5 declaration of David A. Rockstraw, Ph.D. that was 6 submitted as Hydrite Exhibit 1025 in IPR2015-1586. 7 Do you have that there in front of you? 8 A. I do. 9 Q. And I've asked the Court Reporter to 10 mark as SR 2 the supplemental declaration of 11 David A. Rockstraw that was submitted as Hydrite 12 Exhibit 1025 in the other IPR proceeding, 13 IPR2015-1592. 14 Do you have that there as well? 15 A. I have that also. 16 Q. And, Dr. Rockstraw, if you could turn to 17 the last page of SR 1. Is that your signature 18 there at the end? 19 A. Yes, it is. 20 Q. If you can turn to the last page of 21 SR 2. Is that your signature there as well? 22 A. Yes, it is. 23 Q. These documents are substantively very 24 similar, aren't they?</p>	<p style="text-align: right;">Page 8</p> <p>1 Q. Who prepared first drafts of these? 2 A. I believe I worked closely with Richard 3 Roche on the first draft. 4 Q. Now, the substantive statements that are 5 made in each of these on the various publications 6 are the same, aren't they? 7 A. Repeat the question. 8 Q. The substantive statements that are made 9 by you in these declarations characterizing the 10 prior publications are the same, aren't they? 11 A. I believe that is correct. You mean the 12 same as my initial declaration or the two documents 13 are the same? 14 Q. That's a good question. What I was 15 referring to is the substantive statements made in 16 each document are the same as one another? 17 A. The substantive statements in SR 1 and 18 SR 2 are essentially the same, yes. 19 Q. Okay. So, would it be okay with you for 20 times at this deposition if we refer to the 21 supplemental declaration that you submitted for the 22 '469 patent, that is, SR 1? 23 A. That would be fine. 24 Q. As you sit here are you aware of any</p>
<p style="text-align: right;">Page 7</p> <p>1 A. Yes, they are. 2 Q. In fact, the only respect in which they 3 differ are their citations to source documents in 4 the respective IPR proceedings, correct? 5 A. I would have to go back through them in 6 detail again to confirm that, but that sounds 7 correct. 8 Q. That's your recollection, isn't it? 9 A. It is. 10 Q. Could you tell me how these came to be 11 prepared. 12 A. Much like my initial deposition, I 13 worked with the team here at Quarles &amp; Brady to put 14 them together. 15 Q. Could you tell me with a little more 16 detail what that work involved on your part and how 17 it proceeded. 18 MR. FAHY: Objection; form. Go ahead. 19 BY THE WITNESS: 20 A. It involved communicating both by 21 telephone and by e-mail, running through drafts of 22 the document until we had it in a form that 23 everyone agreed was ready. 24 BY MR. LUCCI:</p>	<p style="text-align: right;">Page 9</p> <p>1 statement that you made of substance in SR 1 that 2 you didn't make in SR 2? 3 A. I am not. 4 Q. Do you have SR 1 in front of you there? 5 A. Yes, I do. 6 Q. If you could turn to page 1 of SR 1, 7 there is a statement there in paragraph II-A about 8 the Alther reference. Do you see that there? 9 A. I do. 10 Q. Is there anything that would have 11 prevented you from making the statement you make 12 about the Alther reference in your prior 13 declaration? 14 MR. FAHY: Objection; form. 15 BY THE WITNESS: 16 A. I don't recall the details of how I 17 described Alther in my first declaration. 18 BY MR. LUCCI: 19 Q. Is there anything that would have 20 prevented you from making this statement in your 21 prior declaration rather than in your supplemental 22 declaration? 23 A. I don't see any reason why not, no. 24 Q. Turning to page 2, there is a statement</p>

<p style="text-align: right;">Page 10</p> <p>1 there in paragraph B relating to the Winsness 2 reference. 3 Do you see that there? 4 A. I do. 5 Q. Is there anything that would have 6 prevented you from making these statements 7 regarding the Winsness declaration in your prior -- 8 I'm sorry. Let me rephrase that. 9 Is there anything that would have 10 prevented you from making these statements about 11 the Winsness publication in your prior declaration 12 rather than in this declaration? 13 A. I see no reason. 14 Q. And you see on page 3 there is a 15 statement there in paragraph C regarding the ICI 16 reference? 17 A. Paragraph C? 18 Q. Paragraph C on page 3, yes. 19 A. I see it. 20 Q. Is there anything that would have 21 prevented you from making this statement about the 22 ICI reference in your prior declaration rather than 23 in this declaration? 24 A. No.</p>	<p style="text-align: right;">Page 12</p> <p>1 "opposite"? 2 A. I believe it depends on the situation, 3 but opposite typically means something from the 4 other end of a spectrum. 5 Q. Opposite refers to a comparison of two 6 things, right? 7 A. It does. 8 Q. What's the opposite in your work of the 9 term "hot"? 10 A. Of the term "hot"? 11 Q. Yes. 12 A. Cold. 13 Q. The opposite of the term "dark"? 14 A. Would be light. 15 Q. The opposite of the term "lipophilic"? 16 A. Hydrophilic or lipophobic. 17 Q. Can you identify a surfactant that you 18 consider to be hydrophilic? 19 A. One that readily dissolves in water. 20 Q. Is there a particular chemical entity 21 that you can identify that you consider to be 22 hydrophilic as a surfactant? 23 A. A group that has polar characteristics 24 to it would be hydrophilic.</p>
<p style="text-align: right;">Page 11</p> <p>1 Q. Dr. Rockstraw, do you ever use the word 2 "opposite" in your work? 3 MR. FAHY: Objection; form. 4 BY THE WITNESS: 5 A. "Opposite" is in my vocabulary. 6 BY MR. LUCCI: 7 Q. Okay. And you use it in connection with 8 your work? 9 A. I believe I've used the word "opposite" 10 in connection with my work in the past. 11 Q. And how have you used that? 12 MR. FAHY: Objection; form. 13 BY THE WITNESS: 14 A. I don't recall a specific occurrence of 15 using the word "opposite" at this point. 16 BY MR. LUCCI: 17 Q. Is there a definition for the word 18 "opposite" in connection with your work that you 19 have in mind? 20 MR. FAHY: Objection; form. 21 BY THE WITNESS: 22 A. There is not. 23 BY MR. LUCCI: 24 Q. How would you define the word</p>	<p style="text-align: right;">Page 13</p> <p>1 Q. Is there a specific molecule that you 2 can identify that you would consider to be 3 hydrophilic? 4 A. Typically a structure with an oxygen 5 molecule in it has some hydrophilic character to 6 it. 7 Q. Is there a particular molecule of that 8 type that you have in mind by chemical name? 9 A. There is -- I mean, there's plenty of 10 them. There is many of them, but I don't have a 11 specific one in mind. 12 Q. Are you able to provide an example of 13 one as you sit here? 14 A. I believe the TWEEN series are primarily 15 hydrophilic. 16 Q. Do you recall an HLB value associated 17 with one of the TWEEN series surfactants? 18 A. One -- I didn't hear the whole question. 19 I'm sorry. 20 Q. Sure. Do you recall an HLB value 21 associated with one of the TWEEN series 22 surfactants? 23 A. I recall a range of HLB values. 24 Q. And what's that range?</p>

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1 A. Range would be greater than 10. 12 to  
2 15.  
3 Q. Let's consider a surfactant having an  
4 HLB value of 15. Okay?  
5 A. Okay.  
6 Q. Would a surfactant that has an HLB value  
7 of 16 be a surfactant of the opposite type relative  
8 to that surfactant having an HLB value of 15?  
9 MR. FAHY: Objection; form.  
10 BY THE WITNESS:  
11 A. I don't know that I would use the term  
12 "opposite" in connection with that comparison.  
13 BY MR. LUCCI:  
14 Q. So, you are saying that a surfactant  
15 with an HLB of 16 would not be considered of the  
16 opposite type relative to another surfactant that  
17 has an HLB of 15?  
18 MR. FAHY: Objection; form.  
19 BY THE WITNESS:  
20 A. I would consider the one with an HLB of  
21 16 to be more hydrophilic than the one of 15, but I  
22 would consider both of them to be predominantly  
23 hydrophilic.  
24 BY MR. LUCCI:

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1 Q. And neither would be considered of the  
2 opposite type relative to the other in terms of its  
3 hydrophilic character, would it?  
4 MR. FAHY: Objection; form.  
5 BY THE WITNESS:  
6 A. I don't know that there is a value on  
7 the HLB scale that represents the dividing line  
8 between hydrophilic and hydrophobic because all  
9 surfactants have both hydrophilic and hydrophobic  
10 content to them. That's what makes them work at an  
11 interface between two phases.  
12 BY MR. LUCCI:  
13 Q. Does the term "surfactant of the  
14 opposite type" have meaning with respect to a  
15 surfactant having an HLB of 15?  
16 A. I would add another component to that  
17 comparison, and that would be the system in which  
18 the surfactants are being employed.  
19 Q. So, if you were to identify a surfactant  
20 of the opposite type relative to a surfactant  
21 having an HLB of 15, what range of HLB values would  
22 you ascribe to that surfactant?  
23 MR. FAHY: Objection; form.  
24 BY THE WITNESS:

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1 A. Well, 15 is highly hydrophilic. So, it  
2 would have to be less than 15. Again, it would  
3 depend upon the HLB of the system in which the  
4 surfactants are being employed.  
5 Q. How much less than 15 would a surfactant  
6 of the opposite type have to be?  
7 MR. FAHY: Objection; form.  
8 BY THE WITNESS:  
9 A. Again, I would need to know the HLB of  
10 the system that you're using these surfactants in  
11 to be able to answer that question.  
12 BY MR. LUCCI:  
13 Q. Let's just consider the surfactant  
14 having an HLB of 15. Let's assume that's the only  
15 surfactant or emulsifier in the system. What would  
16 a surfactant or emulsifier of the opposite type be  
17 relative to that surfactant having an HLB of 15?  
18 A. So, the system being pure water?  
19 Q. It's an emulsion so it's going to have  
20 water and oil?  
21 A. Right. And so I would need to know the  
22 HLB of the water-oil system in which the surfactant  
23 is being employed.  
24 Q. Let's assume it's corn oil.

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1 A. So we are talking about an HLB of 10  
2 then.  
3 Q. We are talking about a system that has  
4 water and corn oil and a surfactant having an HLB  
5 of 15. Now, in that system what would you consider  
6 to be a surfactant of the opposite type?  
7 MR. FAHY: Objection; form.  
8 BY THE WITNESS:  
9 A. Something less than 10.  
10 BY MR. LUCCI:  
11 Q. So, a surfactant having an HLB of 14  
12 would not be a surfactant of the opposite type  
13 relative to that surfactant having an HLB of 15 in  
14 that system, right?  
15 MR. FAHY: Objection; form.  
16 BY THE WITNESS:  
17 A. For the system we have just described,  
18 that is correct.  
19 BY MR. LUCCI:  
20 Q. Are there any systems in which you would  
21 regard a surfactant having an HLB of 14 to be of  
22 the opposite type relative to a surfactant having  
23 an HLB of 15?  
24 A. A system in which the aqueous and oil

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