IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SILCOTEK CORPORATION, Plaintiff, v. WATERS CORPORATION, Defendant.	Civil Action No. _____ **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff SilcoTek Corporation (hereinafter, "SilcoTek"), by and through its undersigned counsel, hereby avers and alleges the following in support of its Complaint against Defendant Waters Corporation (hereinafter, "Waters"):

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq*., for infringement of two patents. SilcoTek alleges that Waters infringes at least one claim of U.S. Patent No. 10,881,986, entitled, "Liquid Chromatography Technique" ("the '986 patent"), a true and correct copy of which is attached hereto as Exhibit A, and at least one claim of U.S Patent No. 11,131,020, entitled, "Liquid Chromatography System and Component" ("the '020 patent"), a true and correct copy of which is attached hereto as Exhibit B (collectively, the "Asserted Patents").

THE PARTIES

2. SilcoTek is a Pennsylvania corporation having a principal place of business at 225 Penntech Dr., Bellefonte, Pennsylvania 16823. SilcoTek is a leader in the coating industry and

manufactures coatings for and applies coatings to various materials and devices. SilcoTek supplies customers in this District and around the world from its single facility in Bellefonte, Pennsylvania.

3. Upon information and belief, Waters is a Delaware corporation having a principal place of business at 34 Maple Street, Milford, Massachusetts 01757. Upon information and belief, Waters is a specialty measurement company that designs, manufactures, sells, and services among other products high performance liquid chromatography ("HPLC") technology systems and support products, including chromatography columns, and other consumable products. Upon information and belief, Waters employs more than 8,200 people worldwide and operates in over 35 countries, including 14 manufacturing facilities, and has products available in more than 10 countries.

JURISDICTION AND VENUE

4. This is a civil action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

5. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has personal jurisdiction over Waters due, *inter alia*, to its incorporation in Delaware, and upon information and belief, its continuous presence in, and systematic contact with, Delaware. Waters is further subject to this Court's jurisdiction, upon information and belief, at least because of Waters' substantial business in Delaware, including at least part of its past and ongoing infringing activities at issue in this action, regularly doing or soliciting business in Delaware, and engaging in persistent conduct and/or deriving substantial revenue from goods and services provided in Delaware. Upon information and belief, Waters, directly and/or through intermediaries, has committed and continues to commit acts of infringement in Delaware by,

among other things, performing and inducing performance of, and contributing to performance of methods that infringe one or more method claims of, and offering to sell and selling products that infringe one or more apparatus claims of, the Asserted Patents.

7. SilcoTek conducts business in Delaware and thus in this District and has regular customers with principal places of business in this District. In light of Waters' supply of infringing products in this District, SilcoTek has suffered harm in this District.

8. Venue is proper pursuant to 28 U.S.C. §§ 1391 and 1400(b) at least because Waters is incorporated in the State of Delaware and, upon information and belief, has committed acts of infringement in Delaware.

9. In addition, on information and belief, Waters has previously availed itself of this District by bringing and defending against patent infringement matters in this District including for example, *Waters Corporation and Waters Technologies Corp. v. Agilent Technologies Inc.*, Civil Action No. 1:18-cv-01450-MN, filed on September 18, 2018.

THE ASSERTED PATENTS

10. On January 5, 2021, the '986 patent was duly and legally issued to named inventors Jesse Bischof, Lucas D. Patterson, Gary Barone, Mia Yuan, and David A. Smith on an application filed on February 22, 2019. *See* Exhibit A. The application for the '986 patent was published on August 29, 2019. *Id*. SilcoTek has been, and is today, the assignee and owner of all right, title, and interest in and to the '986 patent.

11. On September 28, 2021, the '020 patent was duly and legally issued to named inventor Gary A. Barone based on an application filed on May 8, 2020. *See* Exhibit B. The application for the '020 patent was published on August 20, 2020. *Id*. SilcoTek has been, and is today, the assignee and owner of all right, title, and interest in and to the '020 patent. The '020

patent was a filed as a continuation of U.S Patent Application No. 15/755,962, filed as application No. PCT/US2016/049647 on August 31, 2016, now U.S. Patent No. 10,876,206. The ’020 patent claims priority to provisional application No. 62/212,868 filed on September 1, 2015.

BACKGROUND AND FACTS

12. SilcoTek is a well-known coating service provider, especially for analytical instrumentation and components for gas chromatography (GC). However, Waters is far greater in size and revenue than SilcoTek and wields a substantial market power, especially within the High-Performance Liquid Chromatography (HPLC) industry, which is an analytical instrumentation process outside the scope of GC.

13. On multiple occasions, Waters has acknowledged that SilcoTek has extensive coatings experience. Waters representatives have attended every HPLC-related presentation ever given by Dr. Jesse Bischof of SilcoTek, a named inventor on the ’986 patent, of which there have been numerous. At Eastern Analytical Symposium in 2021, during a presentation by Waters representatives, Waters representatives even acknowledged Dr. Jesse Bischof during their own presentation when asked complicated questions about metal interactions of surfaces in the presence of solvents. They referred to him as the world-leading expert, due to him being a pioneer in using a coating to prevent issues with metal ion contamination and proteins for HPLC analysis.

14. High-performance Liquid Chromatography (HPLC) is a technique in analytical chemistry used to separate, identify, and quantify each component in a mixture. It relies on pumps to pass a pressurized liquid solvent containing the sample mixture through a column filled with a solid adsorbent material. Each component in the sample interacts slightly differently with the adsorbent material, causing different flow rates for the different components and leading to the separation of the components as they flow out of the column.

15. SilcoTek's coating services are used on HPLC components to prevent interaction of the test analyte as well as other fluids with the flow path surface in the components. SilcoTek's inert coating services, like the Dursan® coating service, prevent adsorption, reactivity, and improve surface corrosion resistance. The Dursan® coating service is applied to stainless steel chromatography components, resulting in a high-tolerance durable coating, even under extreme temperatures and pressures.

16. Such coating services are available due to SilcoTek's innovative culture, which includes an "In the Light" core value. SilcoTek develops unique coatings, examines unique applications, tests such coatings in unique applications, and publishes information. To foster such open collaboration, SilcoTek files patent applications based upon early-stage inventions. The '020 patent is based upon SilcoTek's revelation that the HPLC industry would be well-served by the carboxysilane in the amorphous coating of the claimed invention. After further tests and necessary refinement, SilcoTek realized that novel liquid chromatography techniques were enabled, as claimed in the '986 patent.

17. Waters has long known of SilcoTek and had relationships with SilcoTek. For example, on October 16, 2009, Waters and SilcoTek entered into a Confidentiality Agreement protecting Waters and not protecting SilcoTek. SilcoTek's obligations lasted for ten (10) years from the date of disclosure of Waters' proprietary information marked "WATERS PROPRIETARY INFORMATION" or the equivalent. Waters periodically sent small orders to SilcoTek based upon representations that such orders were for qualification of SilcoTek's coating services or for commercial purposes. Waters never identified any orders as being for benchmarking and, to the contrary, made representations regarding the high sales volume that

could be achieved by working with Waters. All orders from Waters of SilcoTek coating services have been under SilcoTek's standard terms and conditions.

18. On or about February 8, 2017, Waters requested to meet with a relatively new sales employee from SilcoTek, Ashley Rhodes, at the Pittsburgh Conference for Analytical and Applied Spectroscopy in Chicago ("Pittcon"). On or about April 3, 2017, Waters contacted Ashley Rhodes requesting a tour of SilcoTek to be scheduled in either April, May, or June of 2017, initiating the process of entering into a mutual non-disclosure agreement. On or about September 8, 2017, after numerous communications resulting in SilcoTek ultimately agreeing to accept Waters' form version of their mutual non-disclosure agreement as offered by Waters, Waters scheduled a visit to SilcoTek for October 18, 2017.

19. On or about September 17, 2017, Waters filed a provisional patent application identifying SilcoTek's Dursan® coating service. Specifically, Waters filed a U.S. patent application, Application Serial No. 62/559,895, for a vapor deposition coated flow path for Liquid Chromatography ("LC") columns on September 18, 2017 that included a reference to SilcoTek's Dursan® coating service. *See* Exhibit H, page 10, lines 2-3.

20. On or about October 17, 2017, one day before the scheduled visit, Waters informed SilcoTek that the decision was made at the last minute to not sign the mutual non-disclosure agreement as offered by Waters. On or about October 18, 2017, representatives from Waters visited SilcoTek.

21. Representatives from Waters visited SilcoTek on September 13, 2019, during which meeting the primary discussion focused on the use of SilcoTek's Dursan® coating service for HPLC components, including for Waters' Premier line of HPLC columns.

22. Upon information and belief, Waters released its "Premier" or "MaxPeak Premier" line of columns and equipment for use in HPLC applications in 2020. Waters' Premier or MaxPeak Premier lines of columns are coated with Waters' MaxPeak™ High Performance Surfaces (HPS). Waters advertises MaxPeak™ HPS as a hybrid silica, specifically an ethylene bridged hybrid silica. *See*, *e.g.*, Exhibit C, Waters webpage for Atlantis Premier BEH Z-HILIC Column. Waters touts that the MaxPeak™ HPS technology significantly reduces unwanted analyte/surface interactions that can lead to poor peak shape and losses in signal intensity. *Id*.

23. Upon information and belief, Waters sells and offers for sale its Premier line of columns incorporating MaxPeak™ HPS technology under product names including, without limitation, "Atlantis Premier," "ACQUITY Premier," "XBridge Premier," "XSelect Premier," "CORTECS Premier," and "MaxPeak Premier SEC." *See* Exhibit D, Waters' webpage for Columns; Exhibit E, Waters' webpage for MaxPeak Premier Columns.

24. Upon information and belief, Waters uses its Premier line of columns incorporating MaxPeak HPS technology in chromatography systems including, for example, without limitation, at least its ACQUITY Premier System and Arc Premier System. *See* Exhibit F, Waters' Chromatography Solutions Brochure, pages 7-8; Exhibit G, Waters' webpage for MaxPeak Premier Solutions.

25. Waters' manufacturing, using, offering to sell, selling, and/or importing of its Premier line of columns incorporating MaxPeak HPS technology in or as part of chromatography systems infringes directly, literally, or under the doctrine of equivalents, the claims of the '020 patent.

26. Waters' use of its Premier line of columns incorporating MaxPeak HPS technology in or as part of chromatography systems to demonstrate, test or perform certain chromatography

techniques or methods, and Waters' inducement of and contribution to its customers' use of Waters' Premier line of columns incorporating MaxPeak HPS technology in or as part of chromatography systems to perform certain chromatography techniques or methods, infringes directly, literally, or under the doctrine of equivalents, or indirectly, by inducing infringement by its customers and/or by contributing to the infringement of its customers, the claims of the '986 patent.

27. Waters' infringement is and/or will continue to be willful. As detailed above, Waters has long known of SilcoTek and had relationships with SilcoTek. Waters has visited SilcoTek's single facility on multiple occasions and has seen and purchased components, including columns, treated with SilcoTek's Dursan® coating service. In addition, Waters representatives have attended almost every presentation over the years by Dr. Jesse Bischoff of SilcoTek, a named inventor on the '986 patent, and even have requested presentation materials.

28. SilcoTek marks its brochures and website for its Dursan® coating service with notes such as "Patents and Trademarks" and "SilcoTek® patents and trademarks are the property of SilcoTek Corporation (see http://www.silcotek.com/company-patents-trademarks)." *See*, *e.g.*, Exhibit J, SilcoTek Dursan® brochure. The referenced URL on the SilcoTek website is directly accessible to the public without charge and corresponds to a list of SilcoTek's patents. Both the '986 and '020 patents are included on this list. *See* Exhibit K, SilcoTek Intellectual Property webpage. Upon information and belief, has reviewed or viewed SilcoTek's website, brochures, list of patents, and patents.

29. Waters knew or should have known of the '968 patent and the '020 patent when they were issued in 2021 at least given that they are listed on SilcoTek's patent list and given Waters' long-time interactions with SilcoTek relating to SilcoTek's Dursan® coating service.

Waters also knew or should have known about the earlier published applications for the ’968 patent and the ’020 patent.

30. Waters certainly knew of the ’968 patent and the ’020 patent at some point in 2021. A 2021 article in *Analytical Chemistry* authored by employees of Waters, entitled, “Using Hybrid Organic−Inorganic Surface Technology to Mitigate Analyte Interactions with Metal Surfaces in UHPLC” discussed construction of and coatings for HPLC columns explicitly cited the ’986 patent. *See* Exhibit I, page 5774 and page 5781, footnote 25.

31. On October 25, 2021, outside counsel for SilcoTek wrote to Keeley Aleman, Esq., Senior Vice President, General Counsel and Secretary for Waters to formally assert that at least the MaxPeak Premier Columns and the MaxPeak High Performance Surfaces infringe the ’986 and ’020 patents.

32. Waters markets and sells its Premier line of columns incorporating MaxPeak HPS technology to the same or substantially similar customers who purchase SilcoTek Dursan® coating service or HPLC components treated with SilcoTek’s Dursan® coating service. Waters and SilcoTek are thus direct competitors in at least selling and offering to sell coating services for chromatography components, including columns, and HPLC systems sold with columns.

33. Any infringement by Waters has caused, is causing, and/or will continue to cause irreparable injury and harm to SilcoTek for which SilcoTek has no adequate remedy at law, including loss of market share.

34. SilcoTek has been and/or will be damaged by Waters’ infringement, at least in the form of SilcoTek’s lost profits and/or lost licensing revenue due to Waters’ infringement.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 10,881,986

35. SilcoTek repeats and re-alleges the averments set forth in paragraphs 1 through 27 of this Complaint by reference as if fully set forth herein.

36. The ’986 patent claims, *inter alia*, a liquid chromatography technique comprising providing a liquid chromatography system having a coated metallic fluid-contacting element or column.

37. Waters has directly infringed, either literally or under the doctrine of equivalents, at least claims 1, 2, 9, and 11-13 of the ’986 patent in violation of 35 U.S.C. § 271(a) by, for example and without limitation, practicing and using the claimed technique and method in the United States in conjunction with using, testing and demonstrating its Premier lines of columns incorporating MaxPeak HPS technology and its chromatography systems that comprise and/or use its Premier lines of columns incorporating MaxPeak HPS technology.

38. For example, claim 1 of the ’986 patent is reproduced below:

> 1. A liquid chromatography technique, comprising:
>
> providing a liquid chromatography system having a coated metallic fluid-contacting element; and
>
> transporting a fluid to contact the coated metallic fluid-contacting element;
>
> wherein the fluid has a protein-containing analyte incompatible with one or both of titanium and polyether ether ketone, and the fluid has a chelating agent incompatible with the one or both of the titanium or the polyether ether ketone, and wherein the fluid includes an analyte selected from the group consisting of tetracycline, N-hydroxypyridine-2-on, adenosine triphosphate, and deoxynucleotide monophosphate.

39. As a non-limiting example, on information and belief, an article published by Waters entitled *Utilization of MaxPeak High Performance Surfaces and the Atlantis PREMIER BEH C18 AX Column to Increase Sensitivity of LC-MS Analysis* by Smith *et al.*, January 2020 (hereinafter “Smith article”), describes Waters’ practice of a liquid chromatography technique comprising all of the elements of claim 1 of the ’986 patent. *See* Exhibit L, Smith article.

40. On information and belief, Waters practiced "a liquid chromatography technique" as described in the Smith article. *See* Exhibit L.

41. On information and belief, Waters provided and used "a liquid chromatography system having a coated metallic fluid-contacting element," namely, for example, an Atlantis PREMIER BEH C_{18} AX Column incorporating MaxPeak HPS technology that contacts an analyte in a liquid chromatography ("LC") system as described in the Smith article. *See* Exhibit L. X-Ray Fluorescence testing has also confirmed that Atlantis PREMIER BEH C_{18} AX Column used by Waters as described in the Smith article is 316 Stainless Steel (approximately 17.80% Cr, 1.86 Mn, 63.71% Fe, 13.70% Ni, 2.88% Mo) as shown in Figure 1 below:

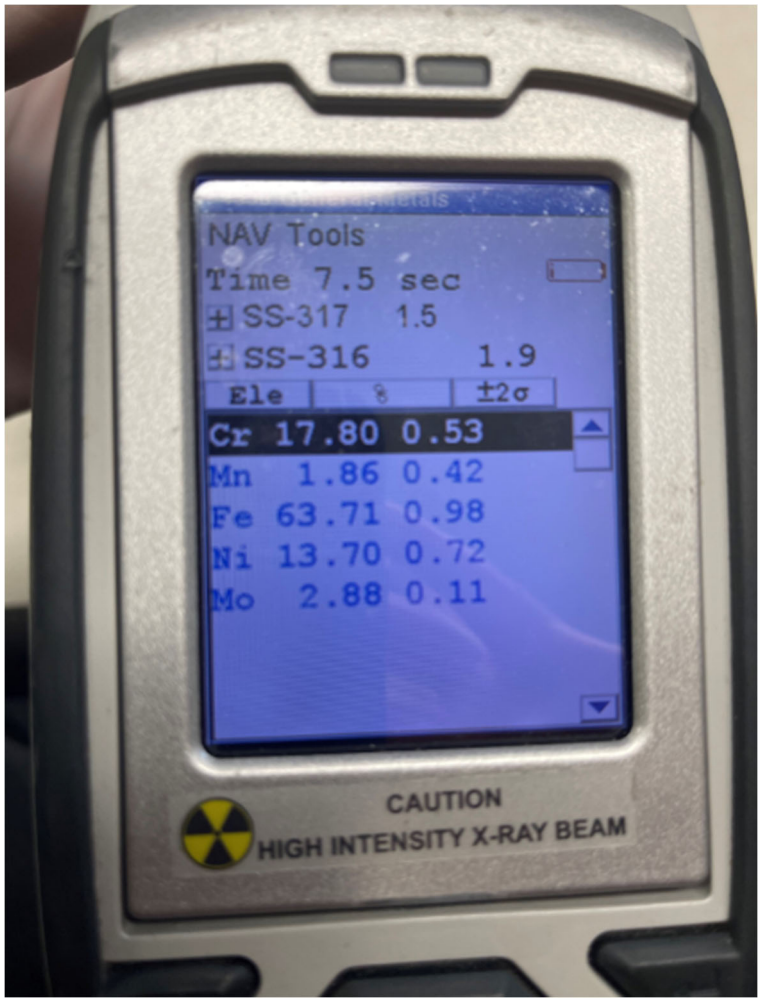
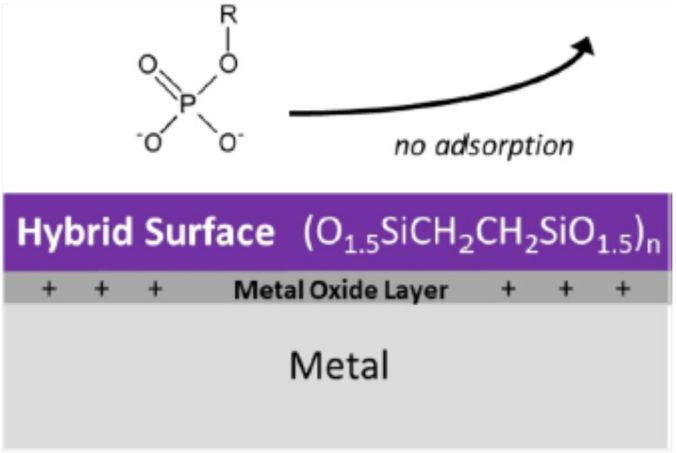


Figure 1

In addition, an article by Waters in a scientific journal indicates that Waters uses a coated metallic fluid-contacting element as shown in the below figure from the article:



See Exhibit I, page 5773

42. On information and belief, Waters practiced "transporting a fluid to contact the coated metallic fluid-contacting element" to "illustrate the benefit of MaxPeak HPS column hardware" when as described in the Smith article "standard solutions of adenosine 5'-monophosphate (AMP) and adenosine 5'-triphoisphate (ATP) were chromatographically separated by the Atlantis PREMIER BEH C18 AX material with … MaxPeak HPS column hardware." *See* Exhibit L.

43. On information and belief, in the technique practiced by Waters "the fluid has a protein-containing analyte incompatible with one or both of titanium and polyether ether ketone." Waters promotes its MaxPeak Premier SEC Columns for protein analysis and an application note from Waters demonstrated improved chromatographic performance with an ACQUITY Premier Peptide C18 Column versus a Titanium-Lined C18 Column Technology, indicating the fluid in the technique practiced by Waters has a protein-containing analyte incompatible with titanium. *See* Exhibit M, Waters' webpage for SEC Columns; Exhibit N, Waters' application note.

44. On information and belief, in the technique practiced by Waters "the fluid has a chelating agent incompatible with the one or both of the titanium or the polyether ether ketone" as the Smith article indicates that the fluid used by Waters includes adenosine 5'-monophosphate (AMP) and adenosine 5'-triphosphate (ATP) which may be considered chelating agents. *See* Exhibit L, Smith article.

45. On information and belief, in the technique practiced by Waters "the fluid includes an analyte selected from the group consisting of tetracycline, N-hydroxypyridine-2-on, adenosine triphosphate, and deoxynucleotide monophosphate" as the Smith article indicates that the fluid used by Waters includes adenosine triphosphate ("ATP") as disclosed in Figure 1 of the Smith article reproduced below:

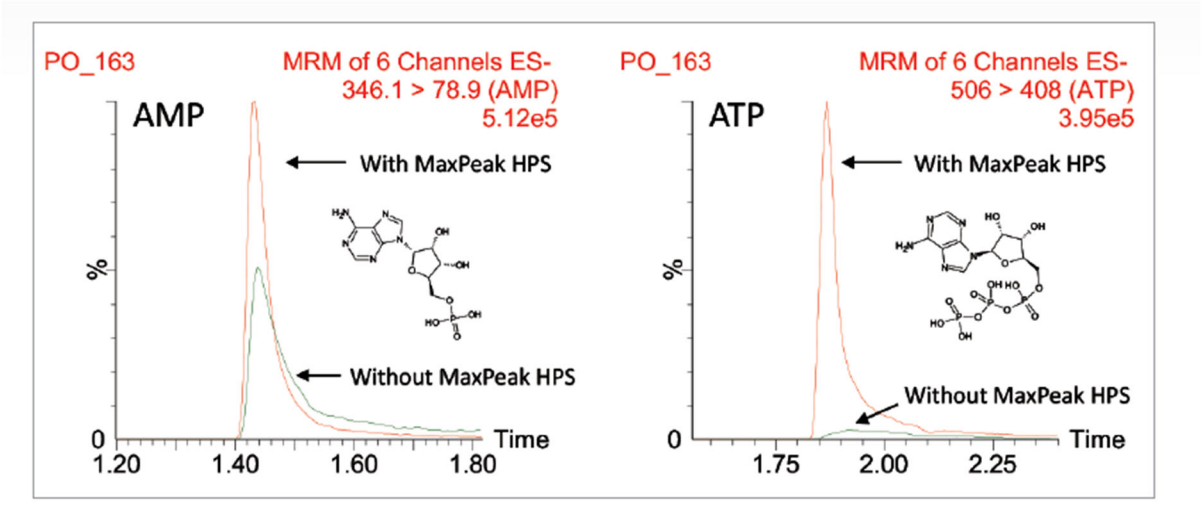


Figure 1. Separation of AMP (left) and ATP (right) on the Atlantis BEH C_{18} AX sorbent with MaxPeak HPS column hardware (red line) and standard column hardware (green line).

See Exhibit L, Smith article, Figure 1.

46. Waters has thus itself directly infringed at least claim 1 of the '986 patent by practicing the claimed technique as described in the Smith article to illustrate the benefit of MaxPeak HPS column hardware.

47. Testing has also confirmed that Atlantis PREMIER BEH C_{18} AX Column used by Waters as described in the Smith article meets the additional limitation of claim 2 of the '986 patent that "the coated metallic fluid-contacting element has a coating including carbon, silicon, oxygen, and hydrogen, and a stainless steel substrate." X-Ray Fluorescence confirmed that the Atlantis PREMIER BEH C_{18} AX Column is 316 Stainless Steel (approximately 17.80% Cr, 1.86 Mn, 63.71% Fe, 13.70% Ni, 2.88% Mo) as shown in Figure 1 in paragraph 34 above. Further, Fourier Transform Infrared Spectroscopy confirmed the presence of carbon, silicon, oxygen, and hydrogen in the coating on the Atlantis PREMIER BEH C_{18} AX Column as shown in Figure 2 below:

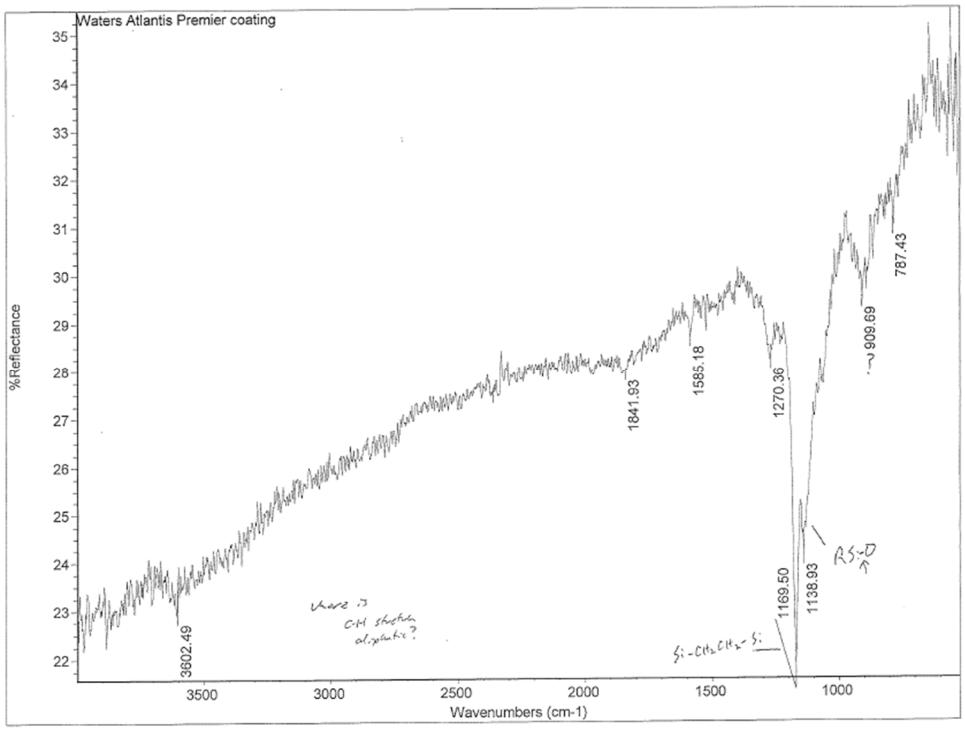
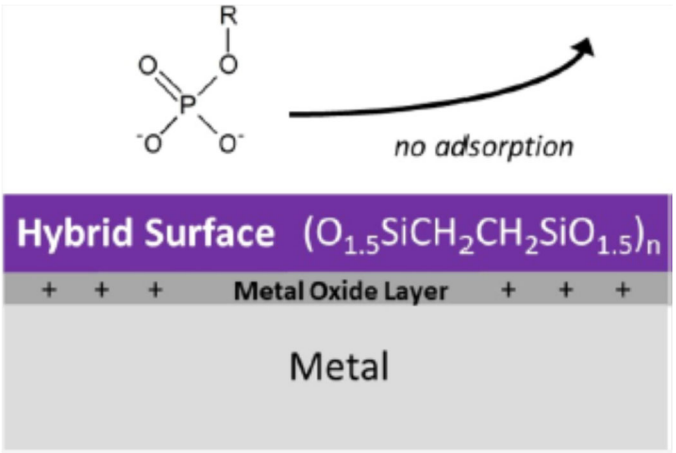


Figure 2

In addition, an article by Waters in a scientific journal indicates that Waters' coating is $(O_{1.5}SiCH_2CH_2SiO_{1.5})_n$ as shown in the figure from that article:



See Exhibit I, page 5773. Waters has thus also itself directly infringed at least claim 2 of the '986 patent by practicing the claim technique as described in the Smith article to illustrate the benefit of MaxPeak HPS column hardware.

48. Waters has further actively induced and/or will actively induce others to infringe at least claims 1, 2, 9, and 11-13 of the '986 Patent in violation of 35 U.S.C. § 271(b) by causing, instructing, urging, encouraging, and/or aiding others to use the technique and method claimed in at least claims 1, 2, 9, and 11-13 of the '986 Patent, and thus causing other to directly infringe at least claims 1, 2, 9, and 11-13 of the '986 Patent, and by making, using, offering to sell, selling, and/or importing in and into the United States its Premier lines of columns incorporating MaxPeak HPS technology, and by instructing customers to use its Premier lines of columns and its chromatography systems that comprise and/or use its Premier lines of columns incorporating MaxPeak HPS technology in infringing methods and techniques.

49. Waters' active inducement has included and/or will include, for example and without limitation, marketing, selling, and offering to sell its Premier lines of columns incorporating MaxPeak HPS technology, providing instructions on how to use its Premier lines of columns incorporating MaxPeak HPS technology, selling chromatography systems comprising and using its Premier lines of columns incorporating MaxPeak HPS technology, and promoting

the use of its Premier lines of columns incorporating MaxPeak HPS technology. For example, Waters has encouraged and/or will encourage customers including scientists and researchers to use its Premier lines of columns incorporating MaxPeak HPS technology and chromatography systems that comprise and/or use its Premier lines of columns incorporating MaxPeak HPS technology by means of its website, marketing materials, and videos.

50. Waters also has instructed and/or will instruct customers on how to use its Premier lines of columns incorporating MaxPeak HPS technology and chromatography systems that comprise and/or use its Premier lines of columns incorporating MaxPeak HPS technology by means of its website and product manuals. Selected portions of Waters' website, product brochures, and articles describing the Premier columns incorporating MaxPeak HPS technology and its uses are attached as Exhibits C-G, I, and L-M and show that Waters has encouraged and/or will encourage its customers to infringe the '986 patent.

51. Waters has also contributed and/or will contribute to its customers' direct infringement of the '986 patent in violation of 35 U.S.C. § 271(c) by providing products, namely, Premier columns incorporating MaxPeak HPS technology and chromatography systems, that comprise and/or use its Premier lines of columns incorporating MaxPeak HPS technology, that are used in the infringing methods and techniques and that are not suitable for any substantial non-infringing use.

52. Upon information and belief, Waters had actual knowledge of the '986 patent prior to the filing of this Complaint.

53. Upon information and belief, Waters knows or is willfully blind to the fact that Waters' actions have infringed and/or will infringe and have induced and contributed and/or will

induce and contribute to infringement of the ’986 patent with the knowledge and intent that one or more claims of the ’986 patent be infringed.

54. Waters’ infringement has caused, is causing, and/or will cause SilcoTek to suffer irreparable injury for which SilcoTek has no adequate remedy at law, including loss of market share and customer goodwill. Waters infringement will continue unless enjoined by the Court. SilcoTek is therefore entitled to a preliminary and permanent injunction against Waters’ further infringement of the ’986 patent.

55. As a direct result of Waters’ infringing activities, SilcoTek has been and/or will be damaged in an amount to be determined at trial. SilcoTek is entitled to recover all damages from Waters and the total profits lost due to Waters’ infringement in an amount proven at trial, but no less than a reasonable royalty as provided by 35 U.S.C. § 284, before any enhancement for the willfulness of Waters’ infringement.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 11,131,020

56. SilcoTek repeats and re-alleges the averments set forth in paragraphs 1 through 48 of this Complaint by reference as if fully set forth herein.

57. The ’020 patent claims, *inter alia*, a liquid chromatography system comprising a liquid chromatography component comprising a substrate and an amorphous coating on the substrate.

58. Waters has directly infringed, either literally or under the doctrine of equivalents, at least claims 1-5, 10, 11, and 19 of the ’020 patent in violation of 35 U.S.C. § 271(a) by, for example and without limitation, making, using, offering to sell, selling, and/or importing in and to the United States the Premier lines of columns incorporating MaxPeak HPS technology and its chromatography systems that comprise and/or use its Premier lines of columns incorporating MaxPeak HPS technology.

59. For example, claim 1 of the ’020 patent is reproduced below:

> 1. A liquid chromatography system, comprising:
>
> a liquid chromatography component, comprising:
>
> a substrate; and
>
> an amorphous coating on the substrate, the amorphous coating having a base layer and a surface layer, the base layer including carboxysilane.

60. As a non-limiting example, on information and belief, Waters’ Atlantis PREMIER BEH C_{18} AX Column incorporating MaxPeak HPS technology is “a liquid chromatography component” that is part of “a liquid chromatography system” such as, for example, the ACQUITY Premier System or the Arc Premier System, comprising all of the elements of claim 1 of the ’020 patent. *See* Exhibit L, Smith article; Exhibit C, Waters webpage for Atlantis Premier BEH Z-HILIC Column.

61. On information and belief, an Atlantis PREMIER BEH C_{18} AX Column incorporating MaxPeak HPS technology is “a liquid chromatography component,” *See* Exhibit L; Exhibit C.

62. On information and belief, an Atlantis PREMIER BEH C_{18} AX Column comprises “a substrate.” For example, X-Ray Fluorescence confirmed that the Atlantis PREMIER BEH C_{18} AX Column is 316 Stainless Steel (approximately 17.80% Cr, 1.86 Mn, 63.71% Fe, 13.70% Ni, 2.88% Mo) as shown in Figure 1 set forth above in paragraph 34. *See also* Exhibit I, page 5773.

63. On information and belief, an Atlantis PREMIER BEH C_{18} AX Column incorporating MaxPeak HPS technology comprises “an amorphous coating on the substrate.” An article by Waters in a scientific journal indicates that Waters employs “an amorphous coating on the substrate” as shown in a figure from that article set forth in paragraph 40 above. *See* Exhibit I, page 5773.

64. On information and belief, the "amorphous coating" used on the Atlantis PREMIER BEH C_{18} AX Column incorporating MaxPeak HPS technology has "a base layer and a surface layer." An article by Waters in a scientific journal indicates that the amorphous coating used by Waters has "a base layer and a surface layer" as shown in a figure from that article set forth in paragraphs 34 and 40 above. *See* Exhibit I, page 5773.

65. On information and belief, the "base layer" for the Atlantis PREMIER BEH C_{18} AX Column incorporating MaxPeak HPS technology is "including carboxysilane" as indicated by the results of the Fourier Transform Infrared Spectroscopy as shown in Figure 2 in paragraph 34 above which confirmed the presence of carbon, silicon, oxygen, and hydrogen in the coating on the Atlantis PREMIER BEH C_{18} AX Column. In addition, an article by Waters in a scientific journal indicates that Waters' coating is $(O_{1.5}SiCH_2CH_2SiO_{1.5})_n$ as shown in a figure from that article set forth in paragraphs 34 and 40 above which indicates that it includes "carboxysilane." *See* Exhibit I, page 5773.

66. Waters has thus directly infringed at least claim 1 of the '020 patent by making, using, offering to sell, selling, and/or importing in and to the United States the Atlantis PREMIER BEH C_{18} AX Columns incorporating MaxPeak HPS technology and the chromatography systems that comprise such columns.

67. In addition, the Atlantis PREMIER BEH C_{18} AX Column is coated with MaxPeak HPS technology on fluid exposed areas, thereby meeting, for example, the limitation of claim 2 of the '020 patent which claims that "the amorphous coating is positioned on regions of the liquid chromatography component that are unable to be concurrently coated through line-of-sight techniques."

68. Further, Fourier Transform Infrared Spectroscopy confirmed the presence of carbon, silicon, oxygen, and hydrogen in the coating on the Atlantis PREMIER BEH C_{18} AX Column as shown in Figure 2 in paragraph 40 above. In addition, an article by Waters in a scientific journal indicates that Waters' coating is $(O_{1.5}SiCH_2CH_2SiO_{1.5})_n$ as shown in a figure from that article set forth in paragraphs 34 and 40 above. *See* Exhibit I, page 5773. The Atlantis PREMIER BEH C_{18} AX Column used by Waters and as described in the Smith article thus meets, for example, the additional limitation of claim 2 of the '020 patent that "the amorphous coating comprises carbon, hydrogen, silicon, and oxygen."

69. Further, X-Ray Fluorescence confirmed that the Atlantis PREMIER BEH C_{18} AX Column is 316 Stainless Steel (approximately 17.80% Cr, 1.86 Mn, 63.71% Fe, 13.70% Ni, 2.88% Mo) as shown in Figure 1 shown in paragraph 34 above. The Atlantis PREMIER BEH C_{18} AX Column used by Waters and as described in the Smith article thus also meets, for example, the limitations of claim 4 of the '020 patent that "the substrate is metal or metallic" and claim 5 of the '020 patent that "the substrate is stainless steel." *See also* Exhibit I, page 5773

70. On information and belief, Waters' other lines of Premier columns incorporating MaxPeak HPS technology such as the as at least the "Atlantis Premier," "ACQUITY Premier," "XBridge Premier," "XSelect Premier," "CORTECS Premier," and "MaxPeak Premier SEC" columns and the chromatography systems that comprise such columns, such as, for example, the ACQUITY Premier System and Arc Premier System, also directly infringe, either literally or under the doctrine of equivalents, at least claims 1-5, 10, 11 and 19 of the '020 patent for the same reasons set forth in the above paragraphs. *See* Exhibit D, Waters' webpage for Columns; Exhibit E, Waters' webpage for MaxPeak Premier Columns.

71. Upon information and belief, Waters had actual knowledge of the '020 patent prior to the filing of this Complaint.

72. Upon information and belief, Waters knows or is willfully blind to the fact that Waters' actions have infringed and/or will infringe and have induced and contributed and/or will induce and contribute to infringement of the '020 patent with the knowledge and intent that one or more claims of the '020 patent be infringed.

73. Waters' infringement has caused, is causing, and/or will cause SilcoTek to suffer irreparable injury for which SilcoTek has no adequate remedy at law, including loss of market share and customer goodwill. Waters infringement will continue unless enjoined by the Court. SilcoTek is therefore entitled to a preliminary and permanent injunction against Waters' further infringement of the '020 patent.

74. As a direct result of Waters' infringing activities, SilcoTek has been and/or will be damaged in an amount to be determined at trial. SilcoTek is entitled to recover all damages from Waters and the total profits lost due to Waters' infringement in an amount proven at trial, but no less than a reasonable royalty as provided by 35 U.S.C. § 284, before any enhancement for the willfulness of Waters' infringement.

WHEREFORE, SilcoTek respectfully requests judgment be entered against Waters as follows:

A. A Judgment that the ’986 patent has been infringed by Waters;

B. A Judgment that the ’020 patent has been infringed by Waters;

C. An award of damages adequate to compensate SilcoTek for the infringement in the form of at least a reasonable royalty and/or Waters’ profits resulting from the infringement, together with prejudgment interest from the date the infringement began;

D. Any damages permitted in the Court’s equitable discretion;

E. A finding that this case is exceptional under 35 U.S.C. § 285 and an award to SilcoTek of its attorneys’ fees, costs, and expenses in this action;

F. An injunction permanently enjoining Waters, its affiliates, officers, directors, employees, agents, licensees, subsidiaries, successors, and assigns, and any and all persons acting in privity or in concert with any of them who receive notice of the injunction, including distributors, sales representatives, and customers, from further acts of infringement of the ’986 patent and the ’020 patent; and

G. Such other and further relief as the Court may deem just and proper.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, SilcoTek hereby demands a trial by jury of all issues triable by jury.

/s/ Francis DiGiovanni

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