

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS**

KURITA AMERICA INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Case No.: 21-cv-1759
	)	
	)	Jury Trial Demanded
BASF CORPORATION,	)	
	)	
BASF ENZYMES, LLC, and	)	
	)	
ILLINOIS RIVER ENERGY, LLC,	)	
D/B/A CHS ETHANOL,	)	
	)	
Defendants.		

COMPLAINT

Plaintiff Kurita America Inc. (“Plaintiff” or “Kurita America”), for its Complaint against Defendants BASF Corporation and BASF Enzymes, LLC (“BASF”), and Illinois River Energy, LLC, d/b/a CHS Ethanol (“CHS Ethanol”) (collectively, “Defendants”), states and alleges as follows:

PARTIES

1. Plaintiff Kurita America is a Minnesota corporation having its principal place of business at 6600 94th Avenue North, Minneapolis, Minnesota. Kurita America, through its Process Technologies team, offers innovative technologies to fuel ethanol manufacturers to help improve their efficiency and profitability.

2. Defendant BASF Corporation is a Delaware corporation with its principal place of business at 100 Park Avenue, Florham Park, New Jersey. Upon information and belief, BASF Corporation owns and operates manufacturing facilities in at least Gurnee, Illinois, and Countryside, Illinois.

3. Defendant BASF Enzymes LLC is a Delaware limited liability company with its principal place of business at 3550 John Hopkins Court, San Diego, California. Upon information and belief, BASF Enzymes LLC is a wholly owned subsidiary of BASF Corporation. BASF Enzymes LLC operates as an industrial biotechnology company, manufacturing and marketing enzyme products in the field of grain processing and other industrial processes.

4. Defendant Illinois River Energy, LLC (d/b/a CHS Ethanol) is a Delaware limited liability company with its principal place of business at 1900 Steward Road, Rochelle, Illinois. CHS Ethanol owns and operates a fuel ethanol plant in Rochelle, Illinois.

JURISDICTION AND VENUE

5. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.* This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has personal jurisdiction over BASF because it has marketed and sold products in this state and this district to be used in Kurita's patented method without authorization, including to CHS Ethanol. BASF also has a physical location in the district.

7. This Court has personal jurisdiction over CHS Ethanol because it engages in business within Illinois and in this district, owns and operates a fuel ethanol plant in this district, and has used Kurita America's patented method without authorization in said fuel ethanol plant in this district.

8. Venue is proper in this district under 28 U.S.C. §§ 1391 and 1400(b), because, for the reasons stated above and other reasons, Defendants are subject to personal jurisdiction in this state and this district, have a physical presence in this state and this district, and have committed acts of infringement in this state and district.

BACKGROUND

9. Plaintiff repeats and re-alleges each and every allegation of the foregoing paragraphs as though fully set forth herein.

10. Kurita America, formerly U.S. Water Services, Inc., is engaged in the business of selling water treatment and purification equipment, materials, and services, including laboratory services, pretreatment design and optimization, well water test kits, and delivery services.

11. A significant portion of Kurita America's business is the sale and service of ethanol process technologies and equipment to ethanol plants and producers, and the provision of training and continuing education in that field.

Fouling in Fuel Ethanol Plants

12. A common problem for ethanol producers is the formation of deposits on ethanol processing equipment. These deposits impede heat transfer and flow and compromise and render less efficient the operation of mechanical devices used in ethanol processing. This deposit formation is at times referred to as ethanol plant "fouling."

13. Prior to Kurita's patented inventions, plants combatted these deposits using two methods. First, plants would remove existing deposits by manually cleaning equipment, e.g., with acid or caustic, requiring the plant to close and workers to undertake the potentially dangerous task of physically crawling into plant equipment for manual scrubbing. Second, plants would reduce the formation of deposits by increasing the solubility of the ethanol processing fluid by adding large quantities of expensive and toxic sulfuric acid. These two methods of combatting deposits cost individual ethanol plants hundreds of thousands of dollars a year.

14. Thus, fouling was a large and costly problem for the ethanol processing industry. Just the downtime alone due to prevention and maintenance relating to fouling cost the ethanol

industry as a whole millions of dollars annually. Products and methods to reduce deposit formation are therefore highly valued in the ethanol industry.

The Patented Inventions

15. Faced with the persistent problem of ethanol plant fouling, two employees of Kurita America, Roy Johnson and Paul Young, sought a solution. Mr. Johnson and Dr. Young invented novel methods to reduce the formation of insoluble deposits during the production of ethanol. Among other things, these novel methods use the conversion of phytic acid or phytates to inorganic phosphates to improve metal solubility and reduce such deposits on plant equipment.

16. Kurita America is the assignee and lawful owner of United States Patent No. 8,415,137 (hereinafter “the ’137 Patent”), entitled “Preventing Phytate Salt Deposition in Polar Solvent Systems,” which duly and lawfully issued from the United States Patent and Trademark Office on April 9, 2013. A true and correct copy of the ’137 Patent is attached as Exhibit A and made a part hereof.

17. Kurita America is also the assignee and lawful co-owner of a continuation of the ’137 Patent, United States Patent No. 8,609,399 (hereinafter “the ’399 Patent”), entitled “Reducing Insoluble Deposit Formation in Ethanol Production,” which was duly and lawfully issued from the United States Patent and Trademark Office on December 17, 2013. A true and correct copy of the ’399 Patent is attached as Exhibit B and made a part hereof.

18. As the owner of the ’137 and ’399 Patents (collectively referred to as “the Kurita America Patents”) by assignment, Kurita America is authorized and has standing to bring legal action to enforce all rights arising under the ’137 and ’399 Patents.

19. The Kurita America Patents describe and claim new and useful methods for reducing the formation of insoluble deposits of phytic acid in, e.g., fuel ethanol-processing equipment.

Kurita America's Patented pHytOUT® Technology

20. Kurita America adopted a system under the brand pHytOUT®, which employs the methods claimed in the Kurita America Patents. Kurita America has presented and marketed the pHytOUT® system to ethanol producers as its “patented” deposit control technology, and it is well known as such in the industry.

21. At its launch, Kurita America's patented method faced significant skepticism in the marketplace, which required Kurita America to run various trials at fuel ethanol plants to demonstrate its viability and benefits. These trials began in or around 2008, with Kurita personnel providing close supervision to plants trialing its patented method for deposit control.

22. Based on the efforts of Mr. Johnson and Dr. Young, Kurita America's patented deposit control technology has enabled numerous ethanol production plants to control deposits, which reduces backend fouling and sulfuric acid use, increases plant productivity and efficiency, and decreases costly and dangerous shutdowns, among other benefits.

Plants' Ongoing Use of the Patented Methods

23. By the Summer of 2011, the fuel ethanol industry had become aware of the success of Kurita America's pHytOUT® method. At that time, Novozymes A/S and Novozymes North America, Inc. (collectively “Novozymes”), an enzyme manufacturer, began to sell phytase to fuel ethanol plants under the name Phytaflow®.

24. In 2013, Kurita America, then U.S. Water Services, Inc., filed a patent infringement suit against Novozymes for inducing and contributing to the infringement of the Kurita America Patents by fuel ethanol plants using Novozymes' phytase products. In 2018, a federal jury in the Western District of Wisconsin found the Kurita America Patents valid and found Novozymes liable for infringement, awarding almost \$8 million in past damages. The case was thereafter settled by the parties.

25. In January 2020, Kurita America settled a separate lawsuit with CTE Global, Inc. (“CTE”), wherein Kurita America had alleged that CTE was infringing the Kurita America Patents by providing its phytase product to fuel ethanol plants for use in Kurita’s patented methods. CTE no longer sells phytase to fuel ethanol plants.

BASF’s Infringement

26. On or about June 2016, BASF began offering for sale and selling a phytase enzyme product to fuel ethanol plants under the name Fuentase[®]. BASF has sold Fuentase[®] as a direct replacement for pHytOUT[®], which is used in fuel ethanol plants to control deposits and reduce backend fouling and sulfuric acid use, as claimed by the Kurita America Patents; Novozymes’ Phytflow[®]; and CTE’s previously-accused phytase product.

27. Upon information and belief, Fuentase[®] is designed for use as a material part of the methods claimed in the Kurita America Patents and has no substantial, non-infringing use.

28. BASF was well aware of Kurita America’s patented technology and the Kurita America Patents at least as early as October 14, 2019, when Kurita America informed BASF by letter of the ’137 and ’399 Patents. Kurita America has presented and marketed pHytOUT[®] as its “patented” deposit control technology and publicly announced the issuance of the ’137 and ’399 Patents to the industry. BASF has thus had actual knowledge of each of the ’137 and ’399 Patents since at least October 14, 2019, and, upon information and belief, BASF has had knowledge of the ’137 and ’399 Patents and/or has willfully blinded itself as to the infringing nature of its activity since the issuance of the ’137 and ’399 Patents.

29. BASF, with knowledge of the ’137 and ’399 Patents, has offered its Fuentase[®] product for sale to a number of Kurita America customers with the intent for said customers to use Fuentase[®] to replace Kurita America’s pHytOUT[®] product to carry out the methods claimed in the ’137 and ’399 Patents.

30. In addition, BASF, with knowledge of the '137 and '399 Patents, has offered its Fuentase[®] product for sale to a number of Novozymes and CTE customers with the intent for said customers to use Fuentase[®] for use in the patented pHytOUT[®] methods, i.e., to carry out the methods claimed in the '137 and '399 Patents.

31. BASF has offered to sell and has sold Fuentase[®] to CHS Ethanol, a dry-mill ethanol production facility in Rochelle, Illinois, and a long-time customer of Kurita America, with the intent that CHS Ethanol use Fuentase[®] in the same manner as Kurita America's patented pHytOUT[®] methods, i.e., to carry out the methods claimed in the '137 and '399 Patents.

32. Upon information and belief, and not by way of limitation, BASF also has offered to sell and/or sold Fuentase[®] for use in carrying out each and every limitation of at least one claim in Kurita America's patented methods in at least the following ethanol plants: Guardian Lima (Lima, Ohio); Guardian Janesville (Janesville, Minnesota); Guardian Hankinson (Hankinson, North Dakota); Marysville Ethanol (Marysville, Michigan); KAAPA Minden (Minden, Nebraska); Reeves Agri Energy (Garden City, Kansas); Red River Energy (Rosholt, South Dakota); Ringneck Energy (Onida, South Dakota); Highwater Ethanol (Lamberton, Minnesota); and certain plants run by Green Plains Inc., including in Fairmont, Minnesota and Obion, Tennessee.

CHS Ethanol and Fuel Ethanol Plants' Direct Infringement

33. CHS Ethanol and at least some of the other fuel ethanol plants referred to above were previous customers of Kurita America. While using pHytOUT[®], the plants were authorized to use and did use Kurita America's patented method.

34. CHS Ethanol and such other ethanol plants subsequently ceased being customers of Kurita America, however, at which time they were no longer authorized to use Kurita America's patented pHytOUT[®] methods.

35. Nonetheless, upon information and belief, CHS Ethanol purchased and used a different phytase as a direct replacement for pHytOUT[®], and subsequently switched to BASF's Fuentase[®] product using Kurita America's patented method for at least the same purpose.

36. Upon information and belief, at least some of the other ethanol plants referred to above also purchased and used BASF's Fuentase[®] product as a direct replacement for pHytOUT[®].

37. By using Fuentase[®] in the manner and method prescribed by Kurita America, CHS Ethanol and at least some of the plants referred to above have practiced each and every limitation and thus directly infringed and/or are directly infringing at least one of the method(s) claimed in each of the '137 and '399 Patents, including without limitation at least independent claim 1 and dependent claims 6 and 7 of the '137 Patent, and at least independent claims 1 and 2 of the '399 Patent, among others.

38. Kurita America has not licensed or otherwise authorized BASF or any of the above-referenced ethanol plants to use the method(s) claimed in the '137 Patent or '399 Patent.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 8,415,137

39. Kurita America repeats and re-alleges each and every allegation of the foregoing paragraphs as though fully set forth herein.

40. Defendant CHS Ethanol, by using BASF's Fuentase[®] product to practice each and every limitation of at least one of the methods claimed by the '137 Patent without authorization, directly infringes one or more claims the '137 patent under 35 U.S.C. § 271(a), including without

limitation at least independent claim 1 and dependent claims 6 and 7 of the '137 Patent, among others.

41. Defendant BASF, by making, selling, and offering to sell phytase enzymes under the brand name Fuentase® to various ethanol plants, with the express purpose of encouraging, aiding and/or causing such plants to practice each and every limitation of at least one of the methods claimed by the '137 Patent, indirectly infringes at least one claim the '137 Patent through inducement and contributory infringement under 35 U.S.C. § 271 *et seq*, including without limitation at least independent claim 1 and dependent claims 6 and 7 of the '137 Patent, among others.

42. Upon information and belief, BASF has actual knowledge of the '137 Patent and actual knowledge that its activities constitute indirect infringement of the '137 Patent or has willfully blinded itself to the infringing nature of its activities, and yet continues its infringing activities.

43. Upon information and belief, BASF intends for its actions to result in infringement of the '137 Patent by ethanol producers or has disregarded an objectively high likelihood that the induced use of its phytase enzyme would infringe one or more claims of the '137 Patent.

44. BASF has and continues to induce infringement of and/or contributorily infringe the '137 Patent actively and intentionally under 35 U.S.C. §§ 271(b) and/or (c).

45. CHS Ethanol and BASF engaged in the respective foregoing conduct with respect to the '137 Patent during the term of the patent and without authority from Plaintiff.

46. CHS Ethanol and BASF's infringement of the '137 Patent has been and will continue to be willful, deliberate and intentional.

47. As a direct and proximate result of CHS Ethanol and BASF's infringement of the '137 Patent, Plaintiff has been and will continue to be irreparably damaged and deprived of its rights in the '137 Patent, for which Plaintiff is entitled to relief.

COUNT II –INFRINGEMENT OF U.S. PATENT NO. 8,609,399

48. Kurita America repeats and re-alleges each and every allegation of the foregoing paragraphs as though fully set forth herein.

49. Defendant CHS Ethanol, by using BASF's Fuentase[®] product to practice each and every limitation of at least one of the methods claimed by the '399 Patent without authorization, directly infringes one or more claims of the '399 patent under 35 U.S.C. § 271(a), including without limitation at least independent claims 1 and 2 of the '399 Patent, among others.

50. Defendant BASF, by making, selling, and offering to sell phytase enzymes under the brand name Fuentase[®] to various ethanol plants, with the express purpose of encouraging, aiding and/or causing such plants to practice each and every limitation of at least one of the methods claimed by the '399 Patent, indirectly infringes at least one claim of the '399 Patent through inducement and contributory infringement under 35 U.S.C. § 271 *et seq.*

51. Upon information and belief, BASF has actual knowledge of the '399 Patent and actual knowledge that its activities constitute indirect infringement of the '399 Patent or has willfully blinded itself to the infringing nature of its activities, and yet continues its infringing activities.

52. Upon information and belief, BASF intends for its actions to result in infringement of the '399 Patent by ethanol producers or has disregarded an objectively high likelihood that the induced use of its phytase enzyme would infringe one or more claims of the '399 Patent.

53. BASF has and continues to induce infringement of and/or contributorily infringe the '399 Patent actively and intentionally under 35 U.S.C. §§ 271(b) and/or (c).

54. CHS Ethanol and BASF engaged in the respective foregoing conduct with respect to the '399 Patent during the term of the patent and without authority from Plaintiff.

55. CHS Ethanol and BASF's infringement of the '399 Patent has been and will continue to be willful, deliberate and intentional.

56. As a direct and proximate result of CHS Ethanol and BASF's infringement of the '399 Patent, Plaintiff has been and will continue to be irreparably damaged and deprived of its rights in the '399 Patent, for which Plaintiff is entitled to relief.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for a judgment that:

- A. Defendants have infringed the '137 and '399 Patents;
- B. Defendants' infringement of the '137 and '399 Patents is willful;
- C. Defendants, their officers, directors, employees, agents, subsidiaries, licensees, servants, successors and assigns, and any and all persons acting in privity or in concert or participation with Defendants, be permanently enjoined from infringement of the '137 and '399 Patents under 35 U.S.C. § 283;
- D. Plaintiff be awarded all damages adequate to compensate Plaintiff for Defendants' infringement of the '137 and '399 Patents, and such damages be trebled under 35 U.S.C. § 284 and awarded to Plaintiff, with pre-judgment and post-judgment interest as allowed by law;
- E. This case be adjudged an exceptional case under 35 U.S.C. § 285, and Plaintiff be awarded attorneys' fees, expert witness fees, costs, and all expenses incurred in this action, with interest;
- F. Plaintiff be awarded all actual and compensatory damages; and

G. Plaintiff be awarded such other and further relief as the Court deems just and proper.

JURY DEMAND

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

Dated: April 1, 2021

PERKINS COIE LLP

By s/ Michelle M. Umberger
Michelle M. Umberger
MUmberger@perkinscoie.com
Christopher G. Hanewicz
CHanewicz@perkinscoie.com
Autumn N. Nero
ANero@perkinscoie.com
Brandon M. Lewis (Admission Pending)
Blewis@perkinscoie.com
33 East Main Street, Suite 201
Madison, WI 53703
(608) 663-7460 (Phone)
(608) 663-7499 (Facsimile)

Kathleen Stetsko
KStetsko@perkinscoie.com
131 S. Dearborn Street, Suite 1700
Chicago, IL 60603-5559
(312) 324-8512 (Phone)
(312) 324-9400 (Facsimile)

*Attorneys for Plaintiff,
Kurita America Inc.*