

# United States Court of Appeals for the Federal Circuit

05-1038, -1049

KAO CORPORATION and THE ANDREW JERGENS COMPANY,

Plaintiffs-Cross Appellants,

v.

UNILEVER UNITED STATES, INC. and CONOPCO, INC.,

Defendants-Appellants.

Arthur I. Neustadt, Oblon, Spivak, McClelland, Maier & Neustadt, P.C., of Alexandria, Virginia, argued for plaintiffs-cross appellants. With him on the brief were Stephen G. Baxter and Richard L. Chinn.

George F. Pappas, Venable LLP, of Washington, DC, argued for defendants-appellants. With him on the brief was Kevin B. Collins. Of counsel were Scott C. Weidenfeller and Roderick R. McKelvie, Covington & Burling, of Washington, DC.

Appealed from: United States District Court for the District of Delaware

Chief Judge Sue L. Robinson

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DECIDED: March 21, 2006

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Before NEWMAN, MAYER, and GAJARSA, Circuit Judges.

Opinion for the Court filed by Circuit Judge GAJARSA. Opinion concurring in part and dissenting in part filed by Circuit Judge NEWMAN. Opinion concurring in part and dissenting in part filed by Circuit Judge MAYER.

GAJARSA, Circuit Judge.

This is an action for patent infringement. Defendants-Appellants Unilever United States, Inc., and Conopco, Inc. (collectively, "Unilever") and Plaintiffs-Cross Appellants Kao Corporation and The Andrew Jergens Company (collectively, "Kao") appeal a judgment of the U.S. District Court for the District of Delaware ruling that Kao's U.S. Patent No. 6,306,382 (the "'382 Patent") was valid and enforceable but not infringed by Unilever's accused product. Kao Corp. v. Unilever U.S., Inc., 334 F. Supp. 2d 527 (D. Del. 2004). The district court exercised jurisdiction pursuant to 28 U.S.C. § 1338. This

court has jurisdiction pursuant to 28 U.S.C. § 1295(a)(1). For the reasons set forth below, we affirm the judgment of the district court.

## BACKGROUND

This case involves a dispute over the patent rights to a cosmetic skin-care product used to remove "keratotic plugs"—commonly known as blackheads—from facial skin. Kao is the owner of a keratotic plug removing product and holder of the patent in suit. Unilever produces the allegedly infringing product, Pond's Clear Pore Strips.

### A. The Patent In Suit

The application that matured into the '382 Patent was filed on November 12, 1996, and entitled "Keratotic Plug Remover. " The patent, which issued on October 23, 2001, contains seven claims. Kao asserted only independent claim 1 and dependent claim 3 against Unilever. Claim 1 recites as follows:

A method for removing keratotic plugs from skin with a cosmetic article, which comprises:

wetting the skin or said cosmetic article; applying onto the skin said cosmetic article; and peeling off said cosmetic article after drying; wherein said cosmetic article comprises:

- i) a substrate selected from the group consisting of woven cloth, non-woven cloth and a plastic film; and
- ii) on said substrate, a layer comprising a copolymer, in an amount effective to remove keratotic plugs, wherein said copolymer is a poly(alkyl vinyl ether/maleic acid) copolymer or a polyalkylvinyl ether/maleic anhydride) copolymer.<sup>1</sup>

'382 Patent, col. 12, ll. 58-66; col. 13, ll. 1-9 (emphasis added).

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<sup>1</sup> Like the district court, we abbreviate the terms "poly(alkyl vinyl ether/maleic acid) copolymer" and "poly(alkylvinyl ether/maleic anhydride) copolymer" as "PVM/MA" in this opinion.

Claim 3 recites "The method of claim 1, wherein said substrate is a non-woven cloth."  
Id. at col. 13, ll. 12-13.

The underlined language in claim 1 is central to this controversy. It was added as an amendment to the claim. Kao explained:

[t]he claim has further been amended to clarify the steps of the method. The addition of the wetting step is not further limiting since the wetting step was implied in the previously submitted claim. No new matter would be added by entry of this amendment.

The written description provides eight examples relating to the preparation and use of a liquid or semi-solid copolymer preparation. The examples do not mention drying the liquid or semi-solid copolymer onto a substrate, but instead discuss applying the copolymer directly to the face. Example 1 specifically states: "A panel washed their [sic] face and used the preparation on their faces at an application rate of 0.1 ml/cm<sup>2</sup>." Id. at col. 6, ll. 6-8. Example 2 states: "The polymers were individually prepared into an aqueous 20-30% by weight solution, and members of the panel used in the same manner as in Example 1." Id. at col. 7, ll. 21-23. Similarly, Example 3 appears to describe liquid formulations that were applied as described in Example 1. Examples 4-8 do not expressly state that the keratotic plug remover was applied as a liquid formulation, but offer formulations in terms of percent weight, like the formulations described in Examples 1-3.

The written description of the '382 Patent does not define the term "cosmetic article" as used in claim 1. Instead, the written description states that "[t]he keratotic plug remover according to this invention may take a form of a poultice using cotton cloth, rayon cloth, tetron cloth, nylon cloth, either woven or non-woven, or using a plastic film sheet, beside pack preparations." Id. at col. 5, ll. 19-22. The written

description further states that "[t]he manner of removing keratotic plugs by the use of the keratotic plug remover of the invention is the same as the manner of using ordinary packs and poultice. Namely, when a pack preparation is used, it is first applied to the part of the skin which has keratotic plugs, particularly likely to the nose, chin, and forehead, and after dried, it is peeled off." Id. at col. 5, ll. 26-31.

The district court concluded, and the parties do not dispute, that "[i]n the context of cosmetics, the term 'pack' means 'a cosmetic paste applied to the skin and allowed to dry'; the term 'poultice' means 'a moist, soft mass of bread, meal, clay, cloth, or other adhesive substance, usually heated, spread on cloth, and applied to warm, moisten, or stimulate an aching or inflamed part of the body.'" Kao Corp., 334 F. Supp. 2d at 534 n.4.

The district court also construed what it termed the "copolymer limitation" of claim 1—the language stating "wherein said copolymer is a poly(alkyl vinyl ether/maleic acid) copolymer or a polyalkylvinyl ether/maleic anhydride) copolymer"—to mean "either poly(alkyl vinyl ether/maleic acid) copolymer or poly(alkylvinyl ether/maleic acid anhydride) copolymer, but not the salt form thereof." Id. at 545. Concluding that "a salt copolymer is a distinct chemical entity from both an acid copolymer and an anhydride copolymer," the court declined "to broaden the plain language of the claim by reading a salt limitation into it." Id. at 546. It also cited elements of the prosecution history in favor of such a limitation, including—but not limited to—the fact that after filing the application for the '382 Patent, Kao filed another application "with claims specifically directed to the salts of the copolymers claimed in the '382 patent." Id. The district court took this as evidence that the '382 Patent does not cover salt forms.

## B. Unilever's Accused Infringing Product

Unilever's Pond's Clear Pore Strips are advertised to remove blackheads and unclog pores. The strips consist of a coated non-woven fabric, and list the ingredients as PVM/MA copolymer and aminomethyl propanol ("AMP"). The coating for the Pond's strips is prepared by mixing 98% by weight of a solution of PVM/MA with 2% by weight of AMP. The AMP reacts with the PVM/MA to form what Unilever and the district court describe as a salt. The instructions provided on the accused product involve wetting the strip, applying it to the face, letting it dry for fifteen minutes, and then removing it.

## C. Proceedings in the District Court

Kao sued Unilever for damages and injunctive relief in November of 2001, alleging that the Pond's product infringed the '382 Patent. It later dropped the claim for damages. In October of 2003, the district court held a three-day bench trial, at the close of which it dismissed Kao's willful infringement claim. On September 3, 2004, the district court issued a ruling that the '382 Patent was valid and enforceable, but not infringed by the Pond's product. The district court found, inter alia, that the '382 Patent adequately described the claimed step of wetting a dried preparation before applying it to the skin; that although Unilever had made out a prima facie case of obviousness, Kao successfully rebutted that case with evidence of unexpected results; and that Kao did not engage in inequitable conduct in the prosecution of its patent when it withheld negative data from the examiner.

## DISCUSSION

### A. The Written Description Requirement

The district court concluded that Kao complied with the written description requirement set forth in 35 U.S.C. § 112. Because compliance with the written description requirement is a question of fact, we review the trial court's determination for clear error. Lampi Corp. v. Am. Power Prods., Inc., 228 F.3d 1365, 1378 (Fed. Cir. 2000). Clear error review "does not entitle this court to reverse the district court's finding simply because it would have decided the case differently." Miles Labs., Inc. v. Shandon Inc., 997 F.2d 870, 874 (Fed. Cir. 1993). We must uphold the trial court's determination if it is "plausible in light of the entire record or where it chooses one of two permissible views of the evidence." Id.

Section 112 of the Patent Act states that the "specification shall contain a written description of the invention." 35 U.S.C. § 112. We have held that "[t]o fulfill the written description requirement, the patent specification must describe an invention in sufficient detail that one skilled in the art can clearly conclude that the inventor invented what is claimed." Cordis Corp. v. Medtronic AVE, Inc., 339 F.3d 1352, 1364 (Fed. Cir. 2003). We have cautioned, however, that "[t]he disclosure as originally filed does not . . . have to provide in haec verba support for the claimed subject matter at issue." Id.

Here, the district court based its conclusion that Kao satisfied the written description requirement on two premises. First, it stated that the words of the claim itself "plainly and directly satisfy the standard employed by the Federal Circuit in assessing written description," because "the phrase 'wetting the skin or said cosmetic article' fairly appraises persons of ordinary skill in the cosmetic field that either the

cosmetic article or the skin . . . must be wet prior to application." Kao Corp., 334 F. Supp. 2d at 550. Second, it stated that, based upon the sequence of events described in the specification, "[t]he wetting step, which appears necessary to aid in the adhesion of the claimed cosmetic article, is so straightforward that a detailed description in the specification is not necessary." Id. at 551. Unilever directs its appeal at the trial court's second rationale, arguing that the inferential step taken by the trial court's analysis is necessarily inadequate to demonstrate that "Kao's inventors were in possession of their invention."

We disagree. Unilever argues primarily that because "packs" and "poultices"—the only embodiments identified in the description—are already wet, the references to drying are insufficient to alert a person having ordinary skill in the art to the wetting step. The district court rejected that argument below, and we are poorly positioned, relative to the finder of fact, to draw a contrary conclusion. Although Unilever's arguments are not without force, we conclude that the district court's judgment that Kao complied with the written description requirement was not clearly erroneous.

#### B. Obviousness

Section 103 of the Patent Act provides that "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a). Because patents are presumed to be valid, see 35 U.S.C. § 282, an alleged infringer seeking to invalidate a patent on obviousness grounds must establish its obviousness by facts supported by clear and convincing evidence. Apotex USA, Inc. v. Merck & Co.,



254 F.3d 1031, 1036 (Fed. Cir. 2001). Here, the district court concluded that Unilever had not met its burden of proof. Kao Corp., 334 F. Supp. 2d at 558-59. We review the district court's factual determinations for clear error and review the ultimate conclusion of obviousness or nonobviousness without deference. Oakley, Inc. v. Sunglass Hut Int'l, 316 F.3d 1331, 1339 (Fed. Cir. 2003).

The trial court found, and the parties do not dispute, that Unilever raised a prima facie case that the '382 patent was obvious in light of "the combination of the Gueret '552 patent and the Gangadharan '107 patent." Kao Corp., 334 F. Supp. 2d at 558. The district court also concluded, however, that "secondary considerations"—in particular, the discovery by Kao of "unexpected results"—were sufficient to rebut the prima facie case, such that "the '382 patent is not invalid for obviousness" in light of the Gueret and Gangadharan prior art. Id.

Here, Unilever challenges the trial court's findings regarding "unexpected results." It raises both procedural and substantive arguments, alleging that the district court erred in finding unexpected results because, first, "Kao never notified Unilever of its intent to rely on unexpected results to challenge Unilever's proof that Kao's patent was obvious"; second, in assessing the unexpected results claim, the district court failed to use "the closest prior art"; and third, the district court failed properly to assess "the totality of the evidence," which, according to Unilever, establishes that the '382 Patent was obvious even in light of the unexpected results.

Unilever argues that because Kao never notified it of its intention to use unexpected results in defending the obviousness challenge, the district court's "implicit refusal to grant Unilever's request that such evidence be barred constitutes an abuse of

discretion." Unilever claims to have suffered "both surprise and substantial prejudice" as a result of Kao's alleged failure, which, according to Unilever, violated both Federal Rule of Civil Procedure 16(e) (stating that a pretrial order "shall control the subsequent course of the action unless modified by a subsequent order") and local rule 16.4(d) (stating that a pretrial order shall contain "a statement of the issues of law which any party contends remain to be litigated").

Kao's response to these allegations appears in a footnote, which reads, in its entirety, as follows:

Unilever asserts (at 32) that it was somehow surprised at Kao's reliance on unexpected results to prove non-obviousness. However, Kao only relied upon the unexpected results it demonstrated to the examiner during the prosecution history to prove non-obviousness. Unilever was certainly aware of this prosecution history and, at trial, Unilever introduced it into evidence.

In its initial brief, Unilever devotes precisely one sentence to its argument that Kao's actions prejudiced it: "Unilever was unable to develop any evidence or argument to rebut Kao's assertion of unexpected results during discovery or at trial." Despite Kao's insubstantial response in the red brief, Unilever's reply brief does not refer at all to the procedural challenge. Given the paucity of Unilever's arguments in this regard—and in particular the fact, conceded by implication, that the unexpected results relied on by Kao were in the prosecution history, which was introduced into evidence by Unilever—we have no basis on which to conclude that the trial court abused its discretion in managing its own trial procedures. See Trs. of the Univ. of Penn. v. Lexington Ins. Co., 815 F.2d 890, 911 n.17 (3d Cir. 1987) (stating that the Third Circuit "will only interfere

with a district court's management of its pretrial order where there is a clear abuse of discretion") (internal quotation omitted).<sup>2</sup>

Unilever next argues that the district court erred in judging the unexpected results in light of the wrong prior art—namely, the Gueret patent. The district court, in finding that Kao's evidence of "a keratotic plug removal ratio of 23%" constituted unexpected results, compared that ratio to the 4% ratio achieved using polyvinyl alcohol in the Gueret patent. Kao Corp., 334 F. Supp. 2d at 558. This court has held that "when unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art." In Re Baxter Travenol Labs., 952 F.2d 388, 392 (Fed. Cir. 1991). Unilever now asserts that Gangadharan, not Gueret, was clearly the closest prior art, and that the district court's analysis of the unexpected results was therefore erroneous.

Unilever's argument is not sustainable. Even if we were to conclude that Gangadharan was clearly the closest prior art, Unilever has not demonstrated, or even alleged, that Gangadharan achieved a removal ratio of anything close to the 23% reported by Kao.<sup>3</sup> That is, Unilever has not alleged that Kao's results would be any less "unexpected" compared to Gangadharan than compared to Gueret. In the absence of such an allegation, any error made by the trial court in using Gueret for its comparison would be harmless.

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<sup>2</sup> The district court's evidentiary rulings are procedural issues, not related to patent law. In resolving such questions we therefore look to the law of the relevant regional circuit—here, the Third Circuit. See, e.g., Microstrategy, Inc. v. Bus. Objects, S.A., 429 F.3d 1344, 1349 (Fed. Cir. 2005) (holding that "this court reviews a district court's evidentiary rulings under the law of the regional circuit").

<sup>3</sup> Unilever does argue that the 23% figure is exaggerated. That claim is discussed in the section on inequitable conduct below.

Finally, Unilever argues that the district court failed to assess properly the "totality of the evidence" of obviousness, and in so doing committed error. Unilever argues that "[t]he mere existence of a secondary indicia [of nonobviousness] does not necessarily rebut a finding of obviousness," and that "[e]ven if the erroneous finding of unexpected results is credited, the overwhelming weight of the evidence demonstrates that the '382 patent is obvious." Our cases make clear that there is no hard-and-fast rule for determining whether evidence of unexpected results is sufficient to rebut a prima facie case of obviousness. We have stated, for example, that rebuttal of a prima facie case "can consist of a comparison of test data showing that the claimed compositions possess unexpectedly improved properties," but also that "[e]ach situation must be considered on its own facts." In Re Dillon, 919 F.2d 688, 692-93 (Fed. Cir. 1990) (en banc). Certainly we have stated on several occasions that unexpected results may be sufficient to rebut a prima facie case of obviousness. See, e.g., In re de Blauwe, 736 F.2d 699, 706 n.8 (Fed. Cir. 1984) (stating that "[a] proper showing of unexpected results will rebut a prima facie case of obviousness").

Unilever argues that even if we accept Kao's evidence of unexpected results, the remaining evidence in the record is so overwhelming that the unexpected results are insufficient to overcome it. It argues that the two prior art references "disclose every limitation of the claimed invention and provide a strong motivation for their combination," and that while "[t]he heart of Kao's alleged invention is . . . the use of" the particular polymers identified in the patent, "Gangadharan invented the use of this copolymer as a keratotic plug remover prior to Kao's alleged invention, and described a species of this polymer, PVM/MA, as 'most preferred' for removing keratotic plugs."

Unilever's argument is not sustainable. The "overwhelming evidence" it cites is little more than the very evidence used to establish the prima facie case. If the evidence used to establish the prima facie case were necessarily sufficient to overcome rebuttal of that case, rebuttal would be impossible. That result is simply not logical.

Unilever's real argument is that the 23% removal ratio figure cited by the trial court as the "unexpected result" is unreliable, and therefore an inappropriate basis for rebutting the prima facie case. We address that allegation in our discussion of the inequitable conduct issue below.

### C. Inequitable Conduct

At trial, Unilever alleged that the '382 Patent was rendered unenforceable by Kao's allegedly inequitable conduct during its prosecution. It alleged inequitable conduct on two grounds; the one relevant here is Unilever's claim that Kao "provid[ed] the examiner with misleading test results for the claimed copolymer in the 1998 Uemura declaration." Kao Corp., 334 F. Supp. 2d at 561. Specifically, Unilever charges that Kao willfully failed to report the test results for one variant of PVM/MA, Gantretz AN-119, because those results indicated substantially weaker results than were reported for another variant, AN-169.

In order to clearly understand the argument, some background is necessary. In late 1998, the '328 Patent was facing rejection on multiple grounds, including that its claims were "not commensurate with" the evidence Kao had submitted to that point. In May of 1999, Kao provided the examiner with a second declaration from inventor Uemura (the "Second Uemura Declaration"). The Second Uemura Declaration contained data showing results for samples of a copolymer solution of a particular

weight: Gantretz AN-169, a high molecular weight variant, and a polyvinyl alcohol solution representative of the Gueret prior art. Id. at 539. The data submitted to the examiner showed that the AN-169 solution achieved a "keratotic removal ration [sic]" of 23.3%, while the polyvinyl solution achieved a ratio of only 3.7%. Id. The discrepancy between those results became the basis for the "unexpected results" relied upon by the trial court to overcome Unilever's prima facie case of obviousness.

The record indicates, however, and the trial court found, that the Second Uemura Declaration selectively disclosed only the most positive available data. It failed to reveal several significant facts: first, that the inventors also tested a low molecular weight PVM/MA variant, AN-119, which only achieved a removal ratio of 14.4%; and second, that the inventors did not disclose the margins of error for their tests, which were 7.1% for the AN-169 and 5.2% for the AN-119. In depositions, the inventors were unable to offer any explanation for their failure to report all the results. Id. at 539-40. Moreover, the Second Uemura Declaration also contains a statement that "there is no reason to expect any significant difference in keratotic plug removal for other polymers within the claimed genus." As Unilever points out, this was untrue: the AN-119 results provide evidence of precisely such a difference.

Unilever argues that Kao's failure to report the full results of its testing constitutes inequitable conduct that renders the entire patent unenforceable. The district court disagreed, concluding that although the omission was "material," it was not made with intent to deceive. Id. at 563. The determination of inequitable conduct is squarely within the discretion of the trial court, and we review its determination only for abuse of that discretion. Purdue Pharma L.P. v. Endo Pharms., Inc., 438 F.3d 1123 (Fed. Cir.

2006). We review any underlying factual determinations for clear error, and the trial court's factual findings "will not be disturbed on appeal unless this court has a definite and firm conviction that a mistake has been made." Id. at 1128.

An allegation of inequitable conduct will be sustained if its proponent demonstrates by clear and convincing evidence "that material information was intentionally withheld for the purpose of misleading or deceiving the patent examiner." Allied Colloids, Inc. v. Am. Cyanamid Co., 64 F.3d 1570, 1578 (Fed. Cir. 1995). The first question, then, is whether the information withheld was "material." See Digital Control, Inc. v. Charles Mach. Works, 437 F.3d 1309, 1314 (Fed. Cir. 2006). The district court found that the information at issue here was material, and the parties do not dispute that finding. The district court then addressed the second question: whether Kao omitted the information with intent to mislead or deceive. The trial judge found that it did not. Kao Corp., 334 F. Supp. 2d at 563. In drawing that conclusion, she noted that the omitted AN-119 data—but not the margins of error—was ultimately presented to the examiner, "albeit over one year after" the Second Uemura Declaration was submitted. Id. "Based upon this submission," the trial court "infer[red] that plaintiffs were not trying to conceal the lower ratio from the examiner." Id.

Unilever alleges that in so ruling the trial court abused its discretion. We disagree. Intent to deceive "cannot be inferred solely from the fact that information was not disclosed; there must be a factual basis for a finding of deceptive intent." Purdue Pharma, 438 F.3d at 1134. Here, although there certainly was evidence from which the trial court could have concluded that Kao acted with intent to deceive, we are very reluctant to question the judgment of the finder of fact, who appears to have considered

the relevant evidence—including the rather glaring failure of the inventors to offer any rationale for the omission—in rendering the decision. See id. (declining to infer intent to deceive in similar circumstances). The trial court evidently placed considerable weight on the fact that Kao did eventually submit most of the omitted data to the examiner. Given a blank slate, we might weigh the evidence differently. Given the limited scope of our review, however, we cannot second-guess the trial court's decision.

#### D. Infringement

The district court concluded that Unilever's product did not literally infringe the '382 Patent because it did not meet the "copolymer" limitation of claim 1. The court construed that limitation "to mean either poly(alkyl vinyl ether/ maleic acid) copolymer or poly(alkyl vinyl ether/maleic anhydride) copolymer, but not the salt form thereof." Kao Corp., 334 F. Supp. 2d at 548. It then stated that it was "uncontested" that there were "differences in chemical composition between the claimed PVM/MA and the PVM/MA acid-salt" used by Unilever's product. Id. The primary difference was that Unilever's product contains 98% by weight of PVM/MA copolymer and 2% by weight of AMP, which "reacts with the PVM/MA to form a salt." Id. at 541. The trial court noted that "[t]he experts also agree that the claimed PVM/MA copolymer and the PVM/MA acid-salt have different chemical compositions which can be characterized by differences in their solubility, viscosity, and infrared spectra data." Id. at 548. This evidence provided the basis for the trial court's finding of noninfringement: Kao "failed to carry [its] burden of proving by a preponderance of the evidence that the accused product literally meets the copolymer limitation of claim 1." Id. at 549.



Kao cross-appeals the trial court's finding of noninfringement, arguing primarily that Unilever's product literally infringed the '382 Patent, because, first, Unilever's product in fact uses the PVM/MA acid, and not the salt; and second, even if Unilever's product does use the salt, this court's precedent provides that a salt can infringe an acid claim "if the salt provides the same beneficial effect as the acid."<sup>4</sup> We address these issues in turn.

Kao argues that, contrary to the district court's finding, "Unilever does not use the salt" form of PVM/MA, but the acid form. It bases this conclusion on the fact that the addition of 2% AMP to the PVM/MA only slightly neutralizes the acid, such that "85.5% of the acid groups do not include a salt and only 14.5% of the acid groups include a salt." It repeats its assertion—unsupported by any reference to the record or any other authority—that the resulting compound is only "a slightly neutralized acid and not a salt."

Unilever retorts that "[a]ll of the experts agree that a chemical reaction between PVM/MA and AMP results in the formation of a salt." The record supports this assertion. Kao offers no response to Unilever's account of the record testimony beyond a conclusory assertion, unsupported by citation to the record, that Unilever's account is "not correct." We note also that the relevant claim limitation reads "copolymer" to mean either form of PVM/MA "but not the salt form thereof." Kao Corp., 334 F. Supp. 2d at

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<sup>4</sup> Kao also makes glancing references to an appeal of the district court's claim construction—specifically, its conclusion that claim 1 was limited to PVM/MA acids, and not "the salt form thereof." Kao Corp., 334 F. Supp. 2d at 545. The only references to this claim construction argument, however, appear in the appellee's brief's sections "Statement of the Facts" and "Standard of Review." Neither the statement of issues presented, nor the summary of argument, nor the argument section sets forth any substantive discussion of claim construction. We therefore decline to consider any challenge to the district court's claim construction.

545. The relevant question is not whether Unilever's compound is a salt, but whether it is "a salt form of" PVM/MA. Kao has offered this court no basis on which to conclude that it is not.<sup>5</sup>

Kao also argues that, even if the Unilever product uses the salt, it nevertheless literally infringes the '382 Patent because "the slight neutralization" effected by the addition of AMP to PVM/MA "has no affect on the ability of the claimed PVM/MA to remove keratotic plugs." Kao cites this court's decision in Merck & Co. v. Teva Pharmaceuticals USA, Inc., 347 F.3d 1367 (Fed. Cir. 2003), for the proposition that "a claim that recite[s] an acid" may be "literally infringed by the salt of the acid" where "both the acid and its salt functioned similarly." Here, Kao argues, even Unilever does not dispute that the chemical changes effected by combining PVM/MA with AMP have no effect at all on the function of the invention, that is, on the ability to remove keratotic plugs.

Kao's reliance on Merck and a similar case, Stephens v. Tech International, 393 F.3d 1269 (Fed. Cir. 2004), is misplaced. The portions of those cases addressing the acid/salt issue both involve patent claims that were held to include salt forms. Merck, 347 F.3d at 1371-72; Stephens, 393 F.3d at 1274-75. The district court's claim construction in this case expressly excluded the salt form of PVM/MA, rendering Merck and Stephens readily distinguishable on this, among other, grounds.

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<sup>5</sup> In addition, we note that subsequent to filing the '382 Patent, Kao filed a separate application "with claims specifically directed to salts of the copolymers claimed in the '382 patent." Kao Corp., 334 F.Supp. 2d at 546. If Kao had intended to claim salt forms of the copolymer in the '382 Patent, the subsequent patent application would have been superfluous.

Kao also relies on our decision in SunTiger, Inc. v. Scientific Research Funding Group, 189 F.3d 1327 (Fed. Cir. 1999). SunTiger involved a lens patent and an alleged infringing product that featured, in addition to a lens similar to the claimed lens, a gray coating over most of the lens that allegedly altered the light transmission properties of the lens. The district court granted summary judgment of noninfringement, concluding that the addition of the coating "changed an inherent property" of the lens and thereby avoided infringement despite the fact that a portion of the accused product did, in fact, meet all the patent's claim limitations. Id. at 1336. We reversed, stating that "we have never required that a claim read on the entirety of an accused device in order to infringe," and that one cannot "avoid infringement merely by adding elements if each element recited in the claims is found in the accused device." Id.

Kao analogizes to our ruling in SunTiger, arguing that here, as in that case, the addition of a novel element—here, the AMP—does "not fully eliminate an inherent feature of the claim"—here, "the ability of the PVM/MA to remove keratotic plugs." Kao's analogy is unhelpful. The core principle of SunTiger is that the failure of some portion of an accused product to meet all the claim limitations is insufficient to sustain summary judgment of noninfringement where another portion of the accused product does meet all the claim limitations. That is not the situation here, where—because the district court did not err in determining that Unilever's product used a salt, not the claimed acid—no portion of the accused product meets all the claim limitations. Where, as here, no part of the accused infringing product meets all the claim limitations of the patent, the remedy available to the patentholder is an action under the doctrine of

equivalents. Kao has not raised a doctrine of equivalents argument, and its literal infringement argument fails.

#### E. Attorney Fees

The Patent Act permits a trial court to award attorney fees to the prevailing party "in exceptional circumstances." 35 U.S.C. § 285. This court has stated that such "exceptional circumstances" may exist, "[i]n the case of awards to prevailing accused infringers," where the patentee engaged in "bad faith litigation" or in "fraud or inequitable conduct" in securing the patent. McNeil-PPC, Inc. v. L. Perrigo Co., 337 F.3d 1362, 1371-72 (Fed. Cir. 2003) (internal quotation omitted). Whether a case is exceptional for purposes of § 285 is a question of fact, which we review for clear error. Deering Precision Instruments, LLC v. Vector Dist. Sys., Inc., 347 F.3d 1314, 1322 (Fed. Cir. 2003).

Here, the district court concluded that "the case at bar is not exceptional such that defendants merit an award of attorneys fees," because "[n]othing in the record suggests that plaintiffs engaged in bad faith litigation." Kao Corp., 334 F. Supp. 2d at 564. Unilever charges that the district court's refusal to award attorney fees was erroneous because Kao "engaged in bad faith litigation by pursuing its patent claim" in the face of knowledge that, given that the '382 Patent does not cover salt forms of copolymer, it could not possibly be infringed by Unilever's product, which uses a salt form of polymer. It further alleges that Kao engaged in bad faith litigation by pursuing a claim for willful infringement that was "so devoid of merit that during trial the district court took the rare step of dismissing this allegation at the close of Kao's case-in-chief." Finally, Unilever alleges, as discussed above, that Kao engaged in inequitable conduct.

We may dispose, first, of the notion that this case merited "exceptional" status on the basis of Kao's inequitable conduct, because we have concluded that the trial court did not abuse its discretion in finding that no such conduct occurred. Unilever's bad-faith arguments fare no better. Although Kao's litigation position with respect to the infringement issue did not prevail, it was not so lacking in merit as to warrant "exceptional" status. We conclude that the district court's decision not to declare this case "exceptional" was not clearly erroneous.

#### CONCLUSION

For the reasons set forth in this opinion and in Judge Newman's and Judge Mayer's partial concurrences and dissents, we affirm the judgment of the district court as to inequitable conduct and written description. For the reasons set forth in this opinion and in the partial concurrence and dissent of Judge Newman, we also affirm the judgment of the district court as to obviousness. Finally, for the reasons set forth in this opinion and in the partial concurrence and dissent of Judge Mayer, we affirm the judgment of the district court as to noninfringement.

AFFIRMED.

No costs.

# United States Court of Appeals for the Federal Circuit

05-1038, -1049

KAO CORPORATION and THE ANDREW JERGENS COMPANY,

Plaintiffs-Cross Appellants,

v.

UNILEVER UNITED STATES, INC. and CONOPCO, INC.,

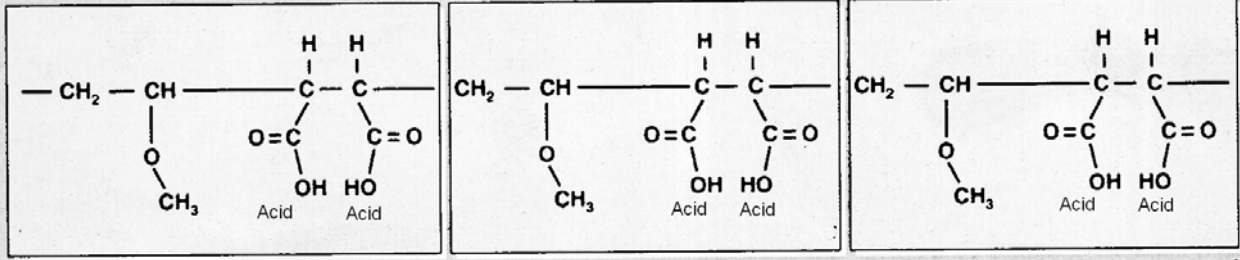
Defendants-Appellants.

NEWMAN, Circuit Judge, concurring in part, dissenting in part.

I agree that the district court correctly held the patent to be valid, and that there was not inequitable conduct in obtaining the patent. However, the panel majority has misunderstood the chemistry, in holding that neutralization of 14.5% of the maleic acid groups means that the totality is a salt and not an acid. This flawed science led to an incorrect conclusion of law.

The claimed maleic acid copolymer has acid groups dangling from the polymer backbone, as illustrated in the district court's opinion:

### Acid Copolymer



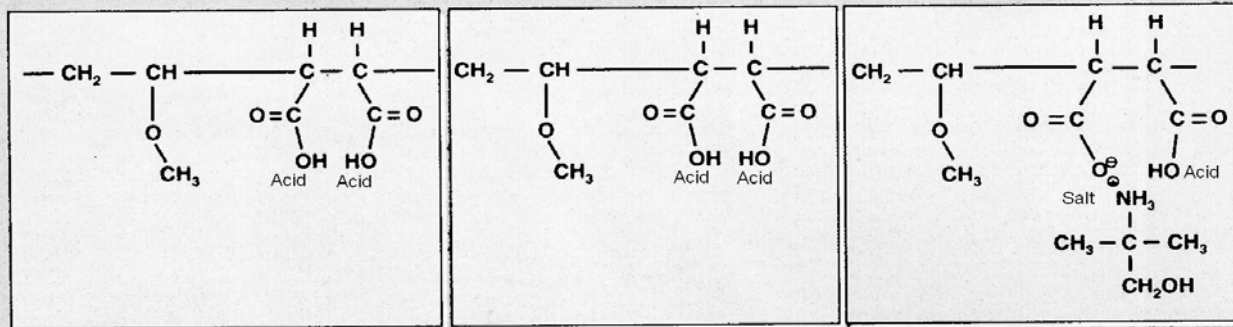
334 F. Supp.2d at 542 (words "Acid" added).

The accused copolymer is identical, but, with the addition of a small amount of base (AMP, amino methyl propanol), 14.5% of the acid groups are neutralized to form a salt. It is simply incorrect to state that the accused copolymer is the salt, for 85.5% of the acid is unchanged, remaining as the acid. This is not disputed. The district court and my colleagues have been led into scientific error by "expert" indirection, for when 85.5% of the acid remains, the product has not been converted into the salt, for 85.5% is the original claimed copolymer:

Claim 1 . . . ii) . . . wherein said copolymer is a poly(alkyl vinyl ether/maleic acid) copolymer or a poly(alkyl vinyl ether/maleic anhydride) copolymer.

The copolymer is the same, whether or not 14.5% of the acid groups are neutralized. Indeed, Unilever testified that the purpose of the AMP was to act as a plasticizer to make the product less brittle. As shown in the district court's opinion, the accused copolymer has the following structure.

### Acid-Salt Copolymer



Id. (words "Acid" and "Salt" added.)

The panel majority states that it is "unsupported by any reference to the record or any other authority -- that the resulting compound is only 'a slightly neutralized acid and not a salt.'" Maj. op. at 16. That is inaccurate. The record includes the following testimony of Professor William J. Brittain, a chemist and expert witness:

Q: Were you able to make any conclusion about the amount of the acid groups which are neutralized by the AMP?

A: Yes, I was.

Q: And what was your conclusion?

A: My conclusion that approximately 15 percent of the acid groups were neutralized.

Q: What happens to the remaining 85 percent of the groups in the PVM/MA acid groups?

A: They remain unchanged.

In addition, the Unilever witness, Phillip Miner, testified that the pH before addition of the AMP was 2.0, and after addition of the AMP was 3.5. These are acidic pH values,<sup>1</sup> reflecting that only 14.5% of the acid groups have been neutralized.

<sup>1</sup> The pH at neutrality is 7.0.



My colleagues appear to have been taken in by the carefully phrased Unilever statement that "[a]ll of the experts agree that a chemical reaction between PVM/MA and AMP results in the formation of a salt." Maj. op. at 16. Of course a reaction between an acid and a base produces a salt. But a reaction between 14.5% of the acid and matching amount of base produces 14.5% salt, leaving 85.5% unreacted acid. From my colleagues' inaccurate science, and the conclusion drawn therefrom, I must, respectfully, dissent.

# United States Court of Appeals for the Federal Circuit

05-1038, -1049

KAO CORPORATION and THE ANDREW JERGENS COMPANY,

Plaintiffs-Cross Appellants,

v.

UNILEVER UNITED STATES, INC. and CONOPCO, INC.,

Defendants-Appellants.

MAYER, Circuit Judge, concurring-in-part and dissenting-in-part.

I agree U.S. Patent No. 6,306,382 satisfies the written description requirement, Kao did not commit inequitable conduct, Unilever does not infringe, and the trial court's decision not to award attorney fees was not an abuse of discretion. However, because Kao's showing of unexpected results was insufficient as a matter of law to overcome the prima facie case of obviousness established by Unilever, I dissent from this court's affirmance of nonobviousness.

Gangadharan, U.S. Patent No. 5,811,107, and Gueret, U.S. Patent No. 5,026,552, recite different inventions. Indeed, Gangadharan discloses the use of the copolymers poly(alkylvinyl ether/maleic acid) and poly(alkylvinyl ether/maleic anhydride) (collectively "PVM/MA") to remove kerototic plugs by a method different from Kao's

invention; and Gueret discloses Kao's method, but not the use of PVM/MA. See Kao Corp. v. Unilver U.S., Inc., 334 F. Supp. 2d 527, 533-35 & 553-55 (D. Del. 2004). Therefore, because Kao's invention was prima facie obvious under either prior art reference in view of the other, see id. at 554 n.18 (discussing the examiner's rejection of Kao's invention under 35 U.S.C. § 103(a) in light of Gangadharan alone); see also id. at 557-58, Kao had the burden to demonstrate unexpected results over both references, see In re Johnson, 747 F.2d 1456 (Fed. Cir. 1984). However, Kao introduced no evidence that its invention removed plugs unexpectedly better than Gangadharan. Even if sufficient to demonstrate unexpected results so as to overcome Gueret (a prior art reference without the PVM/MA limitation), the tests comparing Kao's invention to Gueret provided no basis to overcome Gangadharan, which contains the PVM/MA limitation. See In re Baxter Travenol Labs, 952 F.2d 388, 392 (Fed. Cir. 1991); Merck & Co., Inc. v. Biocraft Labs., Inc., 874 F.2d 804, 806-9 (Fed. Cir. 1989); Johnson, 747 F.2d at 1459-61. Accordingly, there was no legally cognizable basis upon which to conclude that Kao's invention performed unexpectedly better than Gangadharan, and Kao did not overcome the prima facie case of obviousness established by Gangadharan in view of Gueret.