

United States District Court,  
D. Connecticut.

**ENVIRONETICS, INC., Stephen C. Edberg, Stephen C. Wardlaw and Access Medical Systems, Inc,**  
Plaintiffs.

v.

**MILLIPORE CORPORATION,**  
Defendant.

Civ. No. 292cv0825 (JBA)

**March 15, 1996.**

Holder of patent for system designed to test water samples for presence of certain bacteria or microbes sued alleged infringer. Alleged infringer counterclaimed for declarations that patent was not infringed, was invalid, and was unenforceable. Alleged infringer moved for summary judgment on claim of noninfringement. The District Court, Arterton, J., held that: (1) fact questions precluded summary judgment as to literal infringement of claims 1-14 and 16-19; (2) claim 15 was not literally infringed; and (3) fact questions precluded summary judgment as to infringement under doctrine of equivalents.

Motion for summary judgment granted in part and denied in part.

Fact questions precluded summary judgment on claim that water testing system infringed, under doctrine of equivalents, patent for system designed to test water samples for presence of certain bacteria or microbes.

Mary S. Consalvi, Lyon & Lyon, La Jolla, CA, Thomas J. Rechen, James G. Green, Jr., Hartford, CT, for Plaintiffs.

Benjamin A. Solnit, Robert K. Ciulla, Jacqueline D. Bucar, Tyler Cooper & Alcorn, New Haven, CT, Paul H. Heller, Karen J. Kramer, Kenyon & Kenyon, New York City, for Defendant.

***RULING ON DEFENDANT MILLIPORE CORPORATIONS'S MOTION FOR SUMMARY  
JUDGMENT OF NONINFRINGEMENT (DOC # 51)***

**ARTERTON, District Judge.**

Plaintiffs are suing defendant Millipore for infringement of U.S. Patent No. 4,925,789 (" '789 patent"). Environetics is exclusive licensee of the patent and manufacturer of Colilert, the commercial embodiment of the '789 patent. Dr. Stephen Edberg is the patentee. Defendant Millipore counterclaims for a declaration that the '789 patent was not infringed, and that the '789 patent is invalid and unenforceable. Before the court is defendant Millipore's motion for summary judgment that its product, Colisure, does not infringe the '789 patent.

What is patented in the '789 patent is a system designed to test water samples for the presence of certain bacteria or microbes, specifically *E. coli* and coliforms. When the patented product is added to water samples containing *E. coli* and coliforms, and incubated, the sample changes color (indicating the presence of *E. coli*) and turns fluorescent under an ultraviolet light (indicating the presence of coliforms). The patented product utilizes "nutrient indicators." Nutrient indicators are enzyme substrates, ingredients which will be acted on by enzymes present in *E. coli* and coliforms. The enzymes break the nutrient indicators into two parts, a sugar molecule, which will be consumed by the *E. coli* and coliforms as a source of carbon and energy during the period when bacteria are multiplying rapidly, and a "chromogen" which, when released, exhibits a color.

Defendant's Colisure is also a water testing product which when added to a water sample and incubated, turns color and fluoresces when *E. coli* and coliforms are present. Colisure also utilizes nutrient indicators.

Before the court is defendant's motion for summary judgment of noninfringement of each of the 19 claims of the '789 patent. Defendant contends that Colisure neither literally infringes the '789 patent nor infringes the '789 patent under the doctrine of equivalents. For the following reasons, the motion is denied, in part, and granted, in part.

### Summary Judgment

A motion for summary judgment will be granted where there is no genuine issue as to any material fact and it is clear that the moving party is entitled to judgment as a matter of law. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322, 106 S.Ct. 2548, 2552, 91 L.Ed.2d 265 (1986). The burden is on the moving party to demonstrate the absence of any material factual issue genuinely in dispute. *Vann v. City of New York*, 72 F.3d 1040, 1048 (2d Cir.1995), *citing* *Adickes v. S.H. Kress & Co.*, 398 U.S. 144, 157, 90 S.Ct. 1598, 1608, 26 L.Ed.2d 142 (1970). In determining whether a genuine factual issue exists, the court must resolve all ambiguities and draw all reasonable inferences against the moving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S.Ct. 2505, 2513, 91 L.Ed.2d 202 (1986). "Only when reasonable minds could not differ as to the import of the evidence is summary judgment proper." *Bryant v. Maffucci*, 923 F.2d 979, 982 (2d Cir.), *cert. denied*, 502 U.S. 849, 112 S.Ct. 152, 116 L.Ed.2d 117 (1991).

Plaintiff argues that disputes regarding interpretation of patent claims are not appropriately resolved on summary judgment, particularly where construction requires extrinsic evidence. Plaintiff relies upon *Laitram Corp. v. NEC Corp.*, 952 F.2d 1357 (Fed.Cir.1991); *Howes v. Medical Components, Inc.*, 814 F.2d 638 (Fed.Cir.1987); and *Palumbo v. Don-Joy Co.*, 762 F.2d 969 (Fed.Cir.1985).

[1] The Federal Circuit's recent decision in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed.Cir.1995), *cert. granted*, 515 U.S. 1192, 116 S.Ct. 40, 132 L.Ed.2d 921 (1995), rejects plaintiff's position. In *Markman*, the Court held that claim construction, even where it involves complex terms the elucidation of which may benefit from expert testimony, is a matter for the court. *Id.* Each of the cases upon which plaintiff relies was either explicitly or implicitly rejected by the Federal Circuit in *Markman*. *Palumbo v. Don-Joy*, was explicitly included in that line of Federal Circuit decision which the Court rejected in *Markman*. *Id.*, at 976-977. *Howes* relies on *Palumbo* and *Moeller v. Ionetics*, 794 F.2d 653 (Fed.Cir.1986), which the *Markman* Court also included in the line of cases it explicitly rejected. *Id.* at 977. And *Laitram* relies on *Howes*. Hence, disputes over claim construction, even where claim construction appears to involve factual issues, are issues for the court and may be resolved on a summary judgment

motion.

## Literal infringement

### Claims 1-14, 16-19

[2] [3] [4] [5] Determinations regarding literal patent infringement involve a two-stage process. *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 859 F.2d 878, 889 (Fed.Cir.1988). First, the claims are interpreted or construed. *Id.* Claim construction is a matter of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d at 970-971. Second, the trier must determine whether the claims "read on" the accused product, i.e., whether the accused product is indistinguishable from what is declared in the patent claims. *SmithKline*, 859 F.2d at 889. To establish literal infringement, each of the elements set forth in a patent claim must be present in the accused product or process. *Id.* Whether an accused product infringes upon patent claims is a question of fact. *Id.*

The defendant contends that each claim of the '789 patent recites that the "nutrient indicators" are the only nutrients in the medium which support the growth of the targeted bacteria or microbes. Therefore, Millipore contends, a product containing additional nutrients which support substantial reproductive growth of coliform bacteria and *E. coli* would not infringe the '789 claims. Because Colisure contains additional nutrients which support substantial reproductive growth of coliform bacteria and *E. coli*, Millipore concludes, Colisure does not literally infringe the '789 patent.

Plaintiff contends that defendant's construction of the claims of the '789 is in error. Plaintiff contends that each of the claims (with the exception of Claim 15, discussed below) requires only that the nutrient-indicators are the *preferred* source of reproductive growth of the target microbe, and that the inclusion of other nutrients in the medium does not take the accused product, by virtue of its use of other nutrients, out of the claims. For this construction, plaintiff relies on the claims, the specification, and the prosecution history, as well as an apparently undisputed principle of microbiology that bacteria will consume simple molecule energy sources (like the nutrient indicators in both products) before consuming more complex ingredients.

[6] Construction requires consideration of the language of the claims, the specification, and the prosecution history. *Markman*, supra, 52 F.3d at 979-980.

[7] The '789 patent contains both independent and dependent claims, i.e., claims that add limitations to independent claims. Each of the disputed independent claims is phrased in one of two ways:

"... a nutrient-indicator ... which is substantially the only nutrient in said medium which can be metabolized by [the target microbe] to the extent needed to support continued reproductive growth thereof...." (Claims 1, 10, 11, 19)

"... there being no other nutrients in the medium which are able to support substantial reproductive growth of [the target microbe] in the sample." (Claims 4, 8, 16, 18)

Defendant's construction seems plausible because the language of the claims suggests that in the absence of the nutrient-indicators, there are no nutrients which can support reproductive growth. But plaintiff contends that such a reading would be in error. The real emphasis of the claims is that in the actual medium with the nutrient-indicators present, only the nutrient-indicators will be metabolized sufficiently to support

reproductive growth. In other words, what makes the invention distinct is that if the target microbes are present, they and they alone will metabolize the nutrient-indicators and hence produce a tell-tale visible change in the sample. Thus, false negative results, brought about by target microbes feeding on nutrients other than the indicator, are avoided because the bacteria's metabolic mechanism enabling it to consume other energy sources is repressed, and such secondary energy sources will only be consumed after the nutrient-indicator is substantially depleted, by which time the test results are in.

Plaintiff's construction is clearly supported by the specification. Throughout the specification, the reference is to the nutrient-indicator as the primary (or even preferred) nutrient in the medium rather than as the only nutrient. See, e.g., Col. 3, lines 20-25, 37-39. Moreover, the specification makes clear that what is unique about the invention is not that the nutrient-indicator is the only nutrient in the medium, but that the target microbe (unlike other microbes) will, in fact, exclusively metabolize the nutrient-indicator producing the reaction enabling prompt detection of the target microbe in the sample.

The "file wrapper" or prosecution history of the '789 patent also supports plaintiff's construction. In response to the patent examiner's rejection of the proposed claims, patentee Edberg narrowed the claims so that they would be limited to a medium in which only the nutrient-indicator was capable of sustaining reproductive growth. However, the patentee explicitly stated that narrowing of the claims was achieved by clarifying that the "key to the claimed invention is the use of the nutrient-indicator as the primary growth factor in the medium for target microbes." Pl.'s Ex. 7, Tab F at 8. (Emphasis added.). Again, patentee Edberg's amending of the claims during the prosecution history was aimed at clarifying that the claims required that the nutrient-indicators be not the only nutrients in the medium, but the nutrients which the target microbes would, in fact, metabolize. Other nutrients might be included but would not compete with the nutrient-indicators as the source of the target microbe's reproductive growth.

[8] Defendant's expert, Dr. McFeters, presented data which purported to show that the defendant's medium contains nutrients, other than the nutrient-indicators, which support the growth of the target microbes **in the absence of the nutrient-indicators**. See Def.'s Brief, at 19-23. However, Dr. McFeters' data are not inconsistent with the court's construction of the claims of the '789 patent as requiring that the nutrient-indicators be not the only nutrients in the medium, but the preferred nutrients which the target microbes would, in fact, metabolize. Consequently, Dr. McFeters' data do not demonstrate that the accused product does not infringe on Claims 1-14, 16-19 of the '789 patent.

Based on the construction given to Claims 1-14 and 16-19, defendant has failed to demonstrate the absence of genuine issues as to material facts regarding literal infringement.

### **Claim 15**

[9] [10] Claim 15 contains language distinct from that of the other 18 claims of the '789. Specifically, Claim 15 describes:

[a] medium comprising a two component mixture, a first component of which includes a combination of elements, vitamins and other essential nutritive materials required to support growth of the target microorganism but said first component being unable by itself to allow substantial reproductive growth of the target microorganism or any other viable organism in the sample; and a second component which comprises a primary nutrient ingredient, ... there being no other nutrients in the medium which are able to support substantial reproductive growth of the target microorganisms in the sample.

Plaintiff concedes that Claim 15 "may be susceptible to an interpretation requiring that nutrients in the medium other than the nutrient-indicator (the 'first component') be incapable of supporting growth without the nutrient-indicator (the 'second component')." Pl.'s Brief, at 25. The Court adopts that interpretation and construes Claim 15 to require that nutrients in the medium other than the nutrient-indicators be incapable of supporting growth without the nutrient-indicators. In light of that construction of Claim 15 and plaintiff's admission that the patented product contains nutrients which are capable of supporting growth without the nutrient-indicators, the Court grants defendant's motion for summary judgment of noninfringement with regard to Claim 15 only.

### **Doctrine of equivalents**

[11] [12] In addition to literal infringement of patent claims, courts have long recognized that infringement may be found under the doctrine of equivalents. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 70 S.Ct. 854, 94 L.Ed. 1097 (1950). As recently explained by the Federal Circuit, "the application of the doctrine of equivalents rests on the substantiality of the differences between the claimed and accused products or processes, assessed according to an objective standard." *Hilton Davis Chemical Co. v. Warner-Jenkinson Company*, 62 F.3d 1512, 1518 (Fed.Cir.1995) (en banc). "[I]nfringement under the doctrine of equivalents is an issue of fact to be submitted to the jury in a jury trial with proper instructions, and to be decided by the judge in a bench trial." *Id.*, at 1522.

[13] [14] In this case, however, the defendants seek to estop the plaintiffs from asserting the equivalency of the accused product and the product defined in the patent claims. "Prosecution history estoppel limits infringement by otherwise equivalent structures, by barring recapture by the patentee of scope that was surrendered in order to obtain allowance of the claims. Thus by actions taken during the prosecution the patentee can be estopped from reaching subject matter that otherwise meets the criteria of equivalency." *Pall Corporation v. Micron Separations*, 66 F.3d 1211, 1218-1219 (Fed.Cir.1995) (citations omitted). Specifically, defendant contends that plaintiff is estopped from construing the '789 patent claims to allow for the presence of additional nutrients, i.e., in addition to the nutrient indicators, which are able to support substantial reproductive growth.

Defendant contends that in the course of the prosecution of the '789 patent, patentee Edberg, in response to the examiner's rejection of his application, distinguished the various claims of the '789 patent from prior art (in particular, an article by Dahlen, et al.) by emphasizing that the latter included nutrients in addition to the nutrient indicators, where the '789 patent claims contained only the nutrient indicators. Defendant specifically points to patentee Edberg's response to the examiner's rejection of Edberg's claims on the grounds of obviousness (See Def.'s Ex. E, Tab 5 at 11): "The claims thus clearly require that the nutrient indicator be the only metabolized substance in the medium that can produce continued reproductive growth of the target microbes...." Def.'s Ex. E, Tab 6 at 7. In addition, defendant points to Edberg's response to the examiner's objection that some claims did not exclude additional nutrients by amending claims to "exclud[e] the use of additional nutrients which are capable of supporting substantial reproductive growth of the target microorganisms." Def.'s Ex. E, Tab 8 at 10. See also *id.* at 11.

Plaintiff again contends that Edberg did not surrender the construction of the claims which allows for the inclusion of additional nutrients in the medium. Plaintiff agrees that in order to receive approval of the claims, Edberg was required to amend the claims to include the language cited above ("substantially the only nutrient in said medium which can be metabolized by [the target microbe] to the extent needed to

support continued reproductive growth thereof" and "... there being no other nutrients in the medium which are able to support substantial reproductive growth of [the target microbe] in the sample"). But, again, plaintiff contends that the amendments were intended only to clarify that no nutrients which could compete simultaneously with the nutrient-indicators as a source of reproductive growth of the target microorganisms are included in the medium.

A thorough reading of the file wrapper supports plaintiff's view. For example, responding to the examiner's rejection of the proposed claims on grounds of obviousness, patentee Edberg stated the following in order to distinguish the '789 patent from prior art: "nor does [prior art] require that the nutrient indicator be the *only* nutrient in the medium metabolized by the target microbe, and which *cannot* be metabolized by other microbes in the sample." Def.'s Ex. E, Tab 2 at 4. The latter statement leaves open the possibility that other nutrients might be included *if* they will not compete with the nutrient indicator as "food" for the target microbe.

Patentee Edberg also stated the following, again in response to examiner's rejection of some of the claims as being obvious: "The claims have been amended to clarify that the nutrient indicator is *the primary* nutrient in the medium.... The claims thus clearly require that the nutrient indicator be the only metabolized substance that can produce continued reproductive growth of the target microbes...." Pl.'s Ex. 7, Tab F at 7. In the same response, Edberg stated, "The key to the claimed invention is the use of the nutrient indicator as the *primary growth* factor in the medium for the target microbes." Id. at 8. And, finally, again in the same response, the patentee's attempt to distinguish the '789 patent from prior art is especially telling:

In the Dahlen et al. medium, the glucose and tryptose are the primary nutrients, and brain heart infusion, yeast extract and cysteine-hydrochloride are additional nutrients. The MUG [a nutrient indicator] is not the primary nutrient, but is merely in the medium for its ability to produce the color change. The claims as presently amended clearly point out that the nutrient-indicator is the primary nutrient in the medium, or substantially the sole carbon source in the medium.

Id. at 10.

The court finds these statements, particularly the latter, supportive of plaintiff's position that it did not abandon the view that other nutrients may be included in the medium, only that no other nutrients which can compete with the nutrient indicator are included.

The patentee's January 1990 response to the Patent Officer's objections contains a most interesting section, again supportive of plaintiff's construction. Patentee includes the following in his discussion of the relationship between Colilert and the '789 patent:

The Colilert formulation contained ... a booster nutrient for boosting all of the microbes in the sample out of lag phase of growth.... [T]he presence of the booster nutrient does not alter the fact that the nutrient indicators are the only nutrients in the medium that can support log phase growth of *E. coli* and total coliforms....

Pl.'s Ex. 7, Tab G at 9.

This seems to suggest that patentee did not abandon the inclusion of additional nutrients, only those that will compete with the nutrient indicator. The same response also includes the following: "Claim 16 has been

amended to distinguish over the Dahlen et al. article by excluding the use of additional nutrients which are capable of supporting substantial reproductive growth of the target micro-organisms." Id. at 10. Again, the court finds these statements supportive of plaintiff's view.

Based on these selections from the file wrapper, the court declines to estop plaintiff from arguing that the accused product, which differs primarily in that it includes additional nutrients (which defendant has not claimed compete with the nutrient indicators as a source of reproductive growth of the target microbes) is the equivalent of the products claimed in the '789 patent.

[15] Given that plaintiff is not so estopped, the question whether Colisure infringes the claims of the '789 patent under the doctrine of equivalents is a question of fact, not appropriately resolved on a motion for summary judgment.

To summarize, the Court finds that the defendant has failed to demonstrate the absence of genuine issues as to material facts regarding literal infringement of Claims 1-14, and 16-19 or infringement of those claims under the doctrine of equivalents. Accordingly, as to those claims, defendant's motion for summary judgment is DENIED. The Court finds, however, that defendant has demonstrated the absence of genuine issues as to material facts regarding the literal infringement of Claim 15, and as to that claim only, defendant is entitled to judgment as a matter of law. Summary judgment of noninfringement of Claim 15 is therefore GRANTED.

IT SO ORDERED.

D.Conn.,1996.

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