

United States District Court,  
C.D. California, Southern Division.

**BECKMAN COULTER INC,**  
Plaintiff.

v.

**APPLERA CORPORATION,**  
Defendant.

No. SA CV 02-624 AHS (ANx)

**Aug. 16, 2004.**

Andrew J. Guilford, Sheppard Mullin Richter & Hampton, Costa Mesa, CA, Bridgette A. Agness, Daniel Craig Muniz, Darren M. Franklin, Dennis J. Smith, Gary A. Clark, Sheppard Mullin Richter and Hampton, Los Angeles, CA, Mauricio A. Flores, Sheppard Mullin Richter and Hampton, San Diego, CA, Steve P. Hassid, Greenberg Traurig Santa Monica, CA, for Plaintiff.

Adrian Suehee Shin, Douglas E. Lumish, Eric Phillip Xanthopoulos, Jeffrey Gerard Homrig, Matthew Douglas Powers, Vernon M. Winters, Weil Gotshal and Manages Silcon Valley Office, Redwood Shores, CA, Heather Renee Solow, Weil Gotshal and Manges, New York, NY, Robert J. Becher, Quinn Emanuel Urquhart Oliver & Hedges, Los Angeles, CA, for Defendant.

## **ORDER ON CLAIMS CONSTRUCTION AFTER *MARKMAN* HEARING**

**ALICEMARIE H. STOTLER, District Judge.**

### **I.**

#### ***PROCEDURAL BACKGROUND***

On February 2, 2004, the parties filed opening briefs for claim construction of U S Patent No 5,552,580 ('580), U S Patent No Re 37,606 ('606), and U S Patent No Re 37,941 ("1") On February 4, 2004, Beckman Coulter Inc ("Beckman") filed a corrected claims construction brief for the '606 and "1" patents On February 17, 2004, Applera Corporation ("Applera") filed a corrected claims construction brief for the '580 patent On February 20, 2004, the parties filed their respective reply briefs Additionally, Applera filed objections to the submission of the expert declaration of Dr James Jorgenson On March 15, 2004, Beckman filed a response to Applera's objections On March 22, 2004, following oral argument, the Court took the matter under submission On March 24, 2004, Applera filed a notice of decision On March 25, 2004 Beckman filed a request for judicial notice On April 1, 2004, Applera filed a response to Beckman's request for judicial notice The Court declines to consider the post-hearing filings of the parties in this matter

Having reviewed the briefs and declarations submitted by the parties prior to oral argument, in addition to the arguments of counsel at the hearing, the Court adopts the constructions to the disputed terms in the '580,

'606, and '941 patents as discussed below. The Court overrules the objections of both parties regarding the submission of evidence

## II.

### *FACTUAL BACKGROUND*

Beckman is the assignee of the three patents-in-suit On September 3, 1996, the U S Patent and Trademark Office (PTO) issued the '580 patent The claims of the '580 teach the invention of a "heated cover device" The patent, crafted primarily in means-plus-function language, teaches that a cover is heated above the temperature of a vaporizable substance contained within receptacles The heating of the cover to a temperature slightly above that of the substance prevents condensation and evaporative loss of substance volume during experiments The specification also describes an automated process for placing the receptacle, which rests on a temperature-controlled plate, beneath the heated cover

The claims of the '606 and '1 patents describe the same invention for performing "capillary electrophoresis using replaceable gels" The claims of the '606 are primarily phrased as method claims while the '1 is taught, in large part, by apparatus claims However, the abstract, description, specification, and figures of each patent are identical The '606 is a reissue of U S Patent No 5,332,481 ('481), issued by the PTO on July 26, 1994 The '941 is a reissue of U S Patent No 5,421,980 ('980) issued on June 6, 1995 Many of the terms in dispute between the parties appear in both the '606 and '941 patents

"Capillary Electrophoresis" refers to the movement of charged particles through a capillary The technology is valuable in DNA sequencing After DNA is injected into the capillary, the patents teach that molecules of different sizes will travel at disparate speeds through a sieving matrix such as polymerized gel and down the capillary This process allows for the separation and analysis of molecules with like "charge/mass ratios"

## III.

### *DISPUTED TERMS OF THE '580 PATENT*

The Court adopts the following claims constructions for the disputed terms of the '580 patent

#### **1. "[Cover] Temperature Means for Varying the Temperature of the Cover"**

'580 Claims 8, 20, 21, 23, and 35 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is varying the temperature of the cover The 28 corresponding structure is a heating element in the form of a resistive wire disposed in, or resistive materials deposited on, the cover, and a variable power supply connected to the heating element

#### **2. "[Control] Means for [Actively] Controlling the Temperature Means"**

'580 Claims 8, 20, 21, 23, 30, and 35 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is actively controlling the temperature means This means controlling the temperature means to vary the temperature of the cover in response to variations in the temperature of the substance during processing of the substance in the receptacle, and not merely setting the cover at a constant temperature without reference to the temperature of the substance in the receptacle The corresponding structure is a temperature sensor as disclosed at 3 12-15 or a microprocessor as disclosed at 5 2-5

**3. *"Feedback Means for Feeding Back the Actual Temperature of the Cover"***

'580 Claim 8 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is feeding back the actual temperature of the cover, which means measuring the actual temperature of the cover and providing that information to the control means The corresponding structure is a temperature sensor as disclosed in the specification at 3 12-15

**4. *"Wherein the Control Means Controls the Temperature Means to Maintain the Temperature of the Cover to be Slightly Above the Temperature of the Substance in the Receptacle"***

'580 Claims 9, 16, and 25 varying the temperature of the cover in response to variations in the temperature of the substance in the receptacle during processing to maintain a slight temperature differential between the temperature of the cover and the temperature of the substance, and not merely setting the cover at a constant temperature without reference to the temperature of the substance in the receptacle

**5. *"Means for Positioning the Cover onto the Receptacle"***

'580 Claim 10 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is the position of the cover onto the receptacle The corresponding structure is a pivoting support member for the cover, an upper jaw, a lead screw, a motor, and a minicomputer

**6. *"[Automatic] [Positioning] Means for Automatically [Automatic] Positioning [of] the Cover onto the Receptacle"***

'580 Claims 28, 33, and 36 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is automatic positioning of the cover onto the receptacle The corresponding structure is a pivoting support member for the cover, an upper jaw, a lead screw, a motor, and a minicomputer

**7. *"Specified Temperature Profile"***

'580 Claims 15, 20, 23, 24, 31, 34, 35, and 37 Specified variations in temperature over time during processing of the substance in the receptacle

**8. *"Means for Providing Automatic Control to Control the Positioning of the Cover onto the Receptacle"***

'580 Claim 11 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is providing automatic control to control the positioning of the cover onto the receptacle The corresponding structure is a minicomputer 54 depicted in Fig 1

**9. *"Substance Temperature Means for Effecting Temperature Control of the Substance in the Receptacle"***

'580 Claims 13 and 23 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is effecting temperature of the substance in the receptacle The corresponding structure is disclosed in the specification at 1 54-57, 4 52-56, 4 60-63, 5 5-8, and Fig 6

**10. *"Substance Temperature Means for Effecting Temperature Control of the Substance in the Receptacle in Accordance with a Specified Temperature Profile"***

'580 Claims 34 and 37 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is effecting temperature of the substance in the receptacle in accordance with a specified temperature profile The corresponding structure is disclosed in the specification at I 54-57, 4 52-56, 4 60-63, 5 5-8, and Fig 6

**11. *"To Maintain the Temperature of the Cover to be at a Substantially Fixed Given Temperature Above the Temperature of the Substance in the Receptacle"***

'580 Patent claims 17, 21, and 26 The temperature of the cover is varied in response to variations in the temperature of the substance in the receptacle during processing in order to maintain a substantially fixed temperature differential between the cover and the substance in the receptacle

**12. *"To Maintain the Temperature of the Cover 5 (deg.) C Above the Temperature of the Temperature of the Substance in the Receptacle"***

'580 Claims 18, 22, and 27 The temperature of the cover is varied in reference to the temperature of the substance during processing in order to maintain a temperature differential of approximately 5 (deg.) C between the cover and the substance in the receptacle

**13. *"Temperature Means for Creating a Temperature Gradient in the Receptacle Above the Substance"***

'580 Claim 30 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6. The claimed function is creating a temperature gradient in the receptacle This means varying the temperature of the cover in response to variations in the temperature of the substance in the receptacle in order to maintain a temperature differential between them, but not merely setting a constant temperature during processing without reference to the temperature of the substance in the receptacle The corresponding structure is a heating element in the form of a resistive wire disposed in, or resistive materials deposited on, the cover and a power supply connected to the heating element

**14. *"Means for Substantially Preventing Escape of Vapor from the Receptacle"***

'580 Claim 30 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is substantially preventing the escape of vapor from the receptacle The corresponding structure is a cover sized to cover the receptacle and having resilient material to seal the receptacle

**IV.**

***DISPUTED TERMS COMMON TO THE '606 AND '1 PATENTS***

The Court adopts the following claims constructions for the disputed terms common to the '606 and '1 patents

**1. *"Polymerized Gel [Useful for Electrophoresis]"***

'606 Claims 2, 3, 7, 8, 10-13, 16-20, '1 Claims 2, 3, 10, 11, 17, 18, 22-26, 28-36, 43, and 44 Polymerized gel is any medium for electrophoresis containing cross-linked or uncross-linked polymers capable of molecular sieving

## **2. "Capillary"**

'606 Claims 2, 7-13 and 16-20, '1 Claims 2, 3, 10-12, 17, 18, 22-26, 28-36, 43, and 44 A coated tube having a small internal diameter

## **3. "Acrylamide"**

'606 Claim 12, '1 Claims 11 and 26 Acrylamide is the chemical having the formula  $C_3H_5NO$  or  $CH_2CHCONH_2$ , in either the monomeric and polymeric form

## **V.**

### ***DISPUTED TERMS OF THE '606 PATENT***

#### **1. "*Filling the Capillary with a Polymerized Gel by an Application of Force*"**

'606 Claims 2, 7, and 11 Filling the capillary with a polymerized gel by an application of force

#### **2. "*Running a Solution into the Capillary to Remove Spent Gel*"**

'606 Claims 18 and 19 Running a solution other than polymerized gel into the capillary to remove spent gel

## **VI.**

### ***DISPUTED TERMS OF THE '1 PATENT***

#### **1. "*[Filling] Means for Filling the Capillary with the Polymerized Gel [Filling]*"**

'1 Claims 2, 3, 17, 28-33, 43, and 44 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is filling the capillary with polymerized gel The corresponding structure is a vial, which is a small closed vessel, that is placed under pressure

#### **2. "*Means for Introducing the [a] Sample into the [Filled] Capillary*"**

'1 Claims 2, 3, 17, 28-33 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is introducing a sample into a capillary The patent discloses two alternative methods of introducing a sample into a capillary 1) electromigration, and 2) pressure injection The corresponding structure for the electromigration are two electrodes and a voltage supply The corresponding structure for the pressure injection method is a vial placed under pressure

#### **3. "*Means for Performing Electrophoresis*"**

'1 Claims 2, 3, 17, 28-33 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is performing electrophoresis The corresponding structure is a capillary containing a gel sieving matrix, vials, two electrodes, and a voltage supply

**4. "[Removing] Means for Removing a[the] [Spent] Gel from the Capillary so that it can be Refilled with [a] Polymerized Gel"**

"1 Claims 2, 3, 17, 28-33 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is removing spent gel from the capillary so that it can be refilled with fresh gel. The corresponding structure is a vial placed under pressure

**5. "The Removing Means Comprising a Rinsing Device Having a Solution for Expelling Spent Gel from the Capillary"**

"1 Claims 2, 3, 17, 28-33 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is expelling spent gel from the capillary using a solution other than gel The corresponding structure is a vial placed under pressure

**6. "Means for Automatic Control of the Operation of the Apparatus"**

"1 Claims 3, 18, 29, 32, 34-36 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is the automatic control of the operation of the apparatus of a capillary electrophoresis system The corresponding structure is a microprocessor as disclosed in the specification at 2 61-63

**7. "Means for Analyzing Electrophoretically Separated Components of the Sample"**

"1 Claim 23 This is a means-plus-function term pursuant to 35 U S C s. 112, para. 6 The claimed function is analyzing electrophoretically separated components of a sample The corresponding structure is a detector as disclosed in the specification at 2 42

**VII.**

**CONCLUSION**

In the absence of further order of Court, the foregoing claim and term construction shall apply in these proceedings

IT IS SO ORDERED

IT IS FURTHER ORDERED that the Clerk shall serve a copy of this Order on counsel for all parties in this action

C.D.Cal.,2004.

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