

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD K. FENRICH, MATTHEW RARICK, SUSANNAH
WURGLER-MURPHY, and DAVID R. COMEAU.

Appeal 2008-2248
Application 10/427,985
Technology Center 1600

Decided: June 30, 2008

Before, DONALD E. ADAMS, DEMETRA J. MILLS, and JEFFREY N.
FREDMAN, *Administrative Patent Judges*.

MILLS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134. The Examiner has rejected the claims for obviousness. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

Claim 1 is representative.

1. A method for obtaining epidermal skin cells from a test subject comprising the steps of:

loosening the epidermal skin cells and/or other nucleic acid bearing material taken from the surface of the epidermis to form loosened epidermal

skin cells and/or other DNA bearing material taken from the surface of the epidermis;

scraping off a sample of the loosened epidermal skin cells and/or other DNA bearing material from the surface of the epidermis by rubbing a scraping and collecting apparatus having an abrasive or cutting surface on epidermal skin;

collecting the sample of the loosened epidermal skin cells and/or other DNA bearing material on the scraping and collecting apparatus at or near the abrasive or cutting surface; and

sealing the collected sample from atmosphere while the collected sample is still on the scraping and collecting apparatus at or near the abrasive or cutting surface.

3. The method of claim 1, wherein the scraping and collecting apparatus comprises a cover that is movable between (i) an open position in which the abrasive or cutting surface is exposed and (ii) a closed position in which the cover seals the abrasive or cutting surface from atmosphere, and wherein sealing the collected sample from atmosphere comprises moving the cover from the open position to the closed position.

4. The method of claim 1, further comprising extracting nucleic acid from the collected sample while the collected sample is still on the scraping and collecting apparatus at or near the abrasive or cutting surface.

8. The method of claim 1, wherein loosening comprises applying sonic energy to break bonds between epidermal skin cells.

11. The method of claim 1, wherein collecting the sample of the loosened epidermal skin cells and/or other DNA bearing material on the scraping and collecting apparatus comprises collecting the sample on an adhesive material on the abrasive or cutting surface.

12. The method of claim 1, wherein loosening comprises rubbing sandpaper on the epidermal skin to abrade the surface of the outer skin.

15. The method of claim 1, wherein the abrasive or cutting surface comprises an adhesive coating.

16. The method of claim 1, wherein the scraping and collecting apparatus comprises a stick having a surface having longitudinally opposed ends, wherein the surfaces defines a hollowed out depression having an abrasive surface;

wherein loosening the epidermal skin cells and/or other nucleic acid bearing material taken from the surface of the epidermis and scraping off a sample of loosened epidermal skin cells and/or other DNA bearing material from the surface of the epidermis comprise the test subject holding the stick in his or her hand and rubbing his or her thumb, or other body part, on the abrasive surface of the hollowed out depression for a time sufficient to loosen and scrape off surface skin cells, and

wherein collecting the sample of the loosened epidermal skin cells and/or other DNA bearing material on the scraping and collecting apparatus comprises collecting the loosened and scraped off surface skin cells in the hollowed out depression.

18. The method of claim 1, wherein sealing the collected sample from atmosphere comprises placing the sampling device inside a vapor barrier bag, with a desiccant, and then sealing the bag.

Cited References

Sakita et al.	US 4,981,143	Jan. 1, 1991
Tyrrell	US 6,176,371 B1	Jan. 23, 2001
Rheins et al.	US 2002/0127573	Sep. 12, 2002
Chung et al.	US 6,355,439	Mar. 12, 2002
Fein	US 2003/0026794	Feb. 6, 2003
Tavger et al.	US 6,673,081 B1	Jan. 6, 2004

P. Rice et al. Burns/www.elsevier.com/locate/burns, "Dermabrasion – a novel concept in the surgical management of sulphur mustard injuries", Burns 26, 34-40, (2000).

Grounds of Rejection

1. Claims 1-7, 10, 11, 13-15, 20, 21, and 23 stand rejected under 35 U.S.C. § 103 as obvious over Rheins in view of Chung.

2. Claims 8 and 24 stand rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Fein.

3. Claims 9 and 25 stand rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Tavger.

4. Claim 12 stands rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Rice.

5. Claims 16, 17 and 19 stand rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Sakita.

6. Claims 18, 49 and 50 stand rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Tyrell.

DISCUSSION

Background

“The present invention discloses a method ... to non-invasively sample epidermal cells, or other DNA bearing material taken from the surface of the epidermis, for example oils or sweat, of a test subject while ensuring the collection of a large enough quantity of cells or other material for subsequent biological analyses. In particular, the method obtains cells by taking a sample of the epidermis by means of an abrading and/or cutting surface that scrapes off and retains cell samples for subsequent genetic characterization. The abrading and/or cutting surface would be single use, in a sealed container, where the sample can be returned without contamination.” (Spec. 1.)

1. Claims 1-7, 10, 11, 13-15, 20, 21, and 23 stand rejected under 35 U.S.C. § 103 as obvious over Rheins in view of Chung. We select claim 1 as representative of the rejection before us since Appellants have not separately argued some of the claims. Other separately argued claims are individually addressed herein. 37 C.F.R. 41.37(c)(1)(vii).

The Examiner finds that:

Rheins et al. teach a method for obtaining epidermal skin cells from a test subject comprising the steps of:

- a) loosening the epidermal skin cells and/or other nucleic acid bearing material taken from the surface of the epidermis to form loosened epidermal skin cells and/or other DNA bearing material taken from the surface of the epidermis (see paragraph 0008, where, Rheins discloses obtaining the epidermal skin cells using a rigid surface and scraping the skin); and
- b) scraping off and collecting a sample of the loosened epidermal skin cells and/or other DNA bearing material taken from the surface of the epidermis by rubbing a scraping and collecting apparatus having an abrasive or cutting surface on epidermal skin; and sealing the collected epidermal skin cell sample (see paragraph 0008, where, Rheins discloses obtaining the epidermal skin cells using a rigid surface and scraping the skin and paragraph 0027 col. 2 lines 1-5, where the cells are placed in a microfuge tube which is sealed).
- c) collecting the sample of the loosened epidermal skin cells and or other DNA bearing material on the scraping and collecting apparatus at or near the abrasive or cutting surface (see paragraph 0027 col. 2 lines 1-5, where Rheins discloses the cells are recovered from the scalpel indicating the cells are collected on the scalpel at or near the surface).

(Ans. 3-4.)

The Examiner acknowledges that "Rheins does not teach sealing the collected sample from the atmosphere while the collected sample is still on the scraping and collecting apparatus at or near the abrasive or cutting surface. (Ans. 5.)

The Examiner concludes, however, that

[i]t would have been prima facie obvious to utilize the method as taught by Rheins with adhesive as taught by Chung because Rheins disclose combining the tape stripping method with the scraping method for removing cells and cellular material (see col. 2 paragraph 0027 lines 9-12). ... An ordinary practitioner would have been motivated to use method as taught by Rheins with adhesive as taught by Chung in order to efficiently remove epidermal skin cells in a non-invasive manner and that would yield DNA for use in downstream analysis.

Additionally, it would have been obvious to use the method of Rheins with the adhesive and cover as taught by Chung because Chung discloses it is preferred the adhesive is covered over with a protective sheet in order to protect the adhesive surface and the epidermal scraps attached thereto (see col. 4 lines 34-37). An ordinary practitioner would have been motivated to use method as taught by Rheins with the adhesive and cover as taught by Chung in order to protect the adhesive surface and the epidermal scraps collected for subsequent use in downstream analysis.

(Ans. 6.)

Appellants contend that the Rheins and Chung fail to teach or suggest "sealing the collected sample from [the] atmosphere while the collected sample is still on the scraping and collecting apparatus at or near the abrasive or cutting surface," as claimed. (Br. 7.)

In making an obviousness determination over a combination of prior art references, it is important to identify a reason why persons of ordinary

skill in the art would have attempted to make the claimed subject matter. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). When making such a determination, the scope of the prior art and level of ordinary skill must be considered. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

We find no error in the Examiner's prima facie case of obviousness. The examiner has provided a reason from the prior art why persons of ordinary skill in the art would have sealed or covered an epidermal skin sample, as claimed.

Once a prima facie obviousness has been established by the Examiner, Appellants have the burden of providing rebuttal arguments or evidence. *Hyatt v. Dudas*, 492 F.3d 1365, 1369-70 (Fed. Cir. 2007). We are not persuaded by Appellants' rebuttal argument.

The Specification does not use the claim language "sealing the collected sample from atmosphere" and does not define what is meant by this language. The Specification does indicate at page 6 that the sample is covered with a tape or other cover to prevent contamination. For longer term storage the sample can be maintained in a low humidity environment such as a vapor barrier bag. (Spec. 6: 1-9.)

Our mandate is to give claims their broadest reasonable interpretation. Giving claims their broadest reasonable construction 'serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.'
Yamamoto, 740 F.2d at 1571; accord *Hyatt*, 211 F.3d at 1372;
In re Zletz, 893 F.2d 319, 322 (Fed. Cir. 1989)

In re American Academy of Science Tech Center, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004). Thus, we interpret the phrase

“sealing the collected sample from atmosphere” to broadly mean that the sample is sealed.

In addition, the Specification defines “an abrasive or cutting surface” as one that “causes mechanical disruption of the epidermis.” (Spec. 6.) We find that an adhesive tape which removes epidermal scraps from the skin constitutes an abrasive or cutting surface, as claimed, as it causes mechanical disruption of the epidermis.

Rheins discloses obtaining the epidermal skin cells using a rigid surface and scraping the skin, where the cells are placed in a microfuge tube which is sealed. (Rheins, ¶0008.) Rheins describes a collection device may be an adhesive tape. (Rheins, ¶0051.) Chung also discloses using an adhesive tape to obtain a skin sample which is covered over with a protective sheet in order to protect the adhesive surface and the epidermal scraps attached thereto (Chung, col. 4, ll. 34-37). Thus, we find that the combination of cited prior art teaches a method of loosening, scraping, collecting and sealing a collected sample of epidermal skin cells from an atmosphere with a protective sheet or a sealed microfuge tube in order to protect the skin sample from contamination, as claimed.

Appellants further argue that “the Examiner has failed to provide a legally proper motivation to combine the references in the proposed manner.” (Br. 9.) “In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. . . . [A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR Int’l Co. v.*

Teleflex Inc., 127 S.Ct. 1727, 1741-42 (2007). The Supreme Court emphasized that “[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents” (*KSR Int’l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007)). The Court reiterated “the need for caution in granting a patent based on the combination of elements found in the prior art” (*id.* at 1739, 82 USPQ2d at 1395), particularly where there is “no change in their respective functions” (*id.*). In other words, “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results” (*id.*).

In the present case, we find that the evidence of record supports that either sealing a sample in a microfuge, or covering a sample with a protective covering amounts to the combination of familiar covering or sealing elements and is obvious when it does no more than yield predictable results of protecting the sample from contamination.

In view of the above, the rejection of the claims for obviousness is affirmed.

Claim 3

Claim 3 recites that the scraping and collecting apparatus comprises a cover that is moveable between an open position and a closed position. The Examiner contends that Chung teaches that the adhesive is covered over with a protective sheet to protect the adhesive surface and the epidermal scraps adhered thereto and the cover is movable between an open position and a closed position. (Ans. 5-6.) In addition, Rheins discloses obtaining

the epidermal skin cells using a rigid surface and scraping the skin, where the cells are placed in a microfuge tube which is sealed. (Rheins, ¶0008.)

Appellants argue that the protective sheet of Chung is not movable between an open position and a closed position. (Br. 10.)

Appellants have not ascribed a specific meaning to the phrase “movable between an open position and a closed position,” in the Specification. Thus giving the claims their broadest reasonable interpretation we find that when the cover of Chung is not placed on the sample, the cover is in an open position, and when the cover is placed on the sample, the cover is in a closed position. Similarly, the microfuge tube cover (e.g., the stopper or lid) may be either in the open or closed positions. An abrasive or cutting surface disposed in the microfuge tube will be exposed or seal from atmosphere by moving the cover between the open and closed positions. Therefore, we find both the cover of Chung and the stopper of Rheins to be movable between an open position and a closed position. The rejection of claim 3 is affirmed.

Claim 4

The Examiner contends that Chung teaches extracting the nucleic acid from the sample while the collected sample is on the scraping and collecting apparatus at or near the abrasive or cutting surface. (Chung, col. 4, ll. 58-64; Ans. 6.)

Appellants contend that “Chung discusses extracting nucleic acid from an epidermal sample that is attached to an adhesive strip, not a scraping and collecting apparatus analogous to the scraping and collecting apparatus of the claimed invention.” (Br. 11.)

As discussed herein we have found that the Specification defines “an abrasive or cutting surface” as one that “causes mechanical disruption of the epidermis.” (Spec. 6.) We find that an adhesive which removes epidermal cells from the skin constitutes both a scraping and collecting apparatus and an abrasive or cutting surface within the scope of Appellants’ claimed invention, as it causes mechanical disruption of the epidermis. Therefore, we are not persuaded by Appellants’ argument and the rejection of claim 4 is affirmed.

Claim 11.

The Examiner contends that Rheins teaches “collecting the sample of the loosened epidermal cells and/or other DNA bearing material on the scraping and collecting apparatus comprises collecting the sample on an adhesive material on the abrasive or cutting surface”, and that the adhesive is abrasive.” (Ans. 5.)

Appellants contend that Rheins discusses the use of adhesive tape for removing skin as an alternative to scraping (Br. 12) and therefore argues that a tape is not a scraping apparatus.

As discussed herein, we have found that the Specification defines “an abrasive or cutting surface” as one that “causes mechanical disruption of the epidermis.” (Spec. 6.) We find that an adhesive which removes epidermal scraps from the skin constitutes both a scraping and collecting apparatus and an abrasive or cutting surface, as claimed, as it causes mechanical disruption of the epidermis. Therefore we are not persuaded by Appellants’ argument and the rejection of claim 11 is affirmed.

Claim 15.

The Examiner contends that Chung teaches that the “surface comprises an adhesive coating.” (Chung, col. 4, ll. 10-11; Ans. 6.)

Appellants contend that “Chung fails to teach or suggest applying an adhesive to an *abrasive or cutting surface*.” (Br. 12.)

As discussed herein we have found that the Specification defines “an abrasive or cutting surface” as one that “causes mechanical disruption of the epidermis.” (Spec. 6.) We find that an adhesive tape which removes epidermal scraps from the skin constitutes both a scraping and collecting apparatus and an abrasive or cutting surface, as claimed, as it causes mechanical disruption of the epidermis. Therefore we are not persuaded by Appellants’ argument and the rejection of claim 15 is affirmed.

2. Claims 8 and 24 stand rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Fein. We select claim 8 as representative of the rejection before us since Appellants have not separately argued the claims. 37 C.F.R. 41.37(c)(1)(vii).

The Examiner acknowledges that “Rheins and Chung do not teach using an enzyme to loosen the skin cells.” (Ans. 7.) Fein is relied on by the Examiner for disclosing the use of enzymes, specifically proteases and peptidases to loosen skin cells (see paragraph 0004). (Ans. 7.)

The Examiner finds that

[i]t would have been prima facie obvious to the method as taught by Rheins and Chung with the administration of enzymes which loosen the skin as taught by Fein because Fein discloses, "One class of enzymes used in skin-related products is proteolytic enzymes, also called proteases or peptidases, which function to hydrolyze, or break down, proteins. ... When proteolytic enzymes are applied to the surface of skin, they hydrolyze adhesion molecules, resulting desirably in exfoliation of the upper skin layers. Generally, most of the topically applied enzyme-containing products contain proteolytic enzymes, and would thus be directed to applications that involve treating the epidermis (the outermost layer of skin)[see paragraph 0004]." An ordinary practitioner would have been motivated to use method as taught by Rheins and Chung with the administration of enzymes which loosen the skin as taught by Fein in order to efficiently remove, epidermal skin cells in a non-invasive manner.

(Ans. 7.)

We find no error in the Examiner's prima facie case of obviousness.

Appellants contend that this rejection constitutes legal error because the portions of Fein relied on by the Examiner fail to address the deficiencies of the rejection of claim 1. (Br. 7.)

As discussed herein we have found no deficiency in the primary combination of references with respect to claim 1. Having no other argument by Appellants, the rejection of claim 8 is affirmed. Claim 24 falls with claim 8.

3. Claims 9 and 25 stand rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Tavger. We select claim 9 as

representative of the rejection before us since Appellants have not separately argued the claims. 37 C.F.R. 41.37(c)(1)(vii).

The Examiner acknowledges that “Rheins and Chung do not teach using sonic energy to loosen the skin cells.” (Ans. 8) The Examiner relies on Tavger as teaching the use of sonic energy to loosen skin cells (Tavger, col. 8, ll. 28-38; Ans. 8).

The Examiner finds that:

It would have been prima facie obvious to the method as taught by Rheins and Chung with the administration of sonic energy to loosen the skin as taught by Tavger because Tavger discloses part of epidermal layer is exposed to the sonic or supersonic stream so as to be separated from the remaining skin surface (see col, 8 lines 32-34). An ordinary practitioner would have been motivated to use method as taught by Rheins and Chung with the administration of sonic energy to loosen the skin as taught by Tavger in order to efficiently remove epidermal skin cells in a non-invasive manner.

(Ans. 8.)

We find no error in the Examiner’s prima facie case of obviousness. Appellants contend that this rejection constitutes legal error because the portions of Tavger relied on by the Examiner fail to address the deficiencies of the rejection of claim 1. (Br. 7.)

As discussed herein we have found no deficiency in the primary combination of references with respect to claim 1. Having no other argument from Appellants, the rejection of claim 9 is affirmed. Claim 25 falls with claim 9.

4. Claim 12 stands rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Rice.

The Examiner finds that Rheins and Chung do not teach using sandpaper to loosen the skin cells. (Ans. 8.) The Examiner, therefore, relies on Rice as teaching the use of sandpaper to loosen skin cells. (Ans. 8.)

The Examiner concludes that:

It would have been prima facie obvious to the method as taught by Rheins and Chung with sandpaper to loosen the skin as taught by Rice because Rice discloses that dermabrasion particularly with sandpaper is a well established method in which epidermal skin cells are removed (see p. 36 col. 2 second full paragraph under 1.2). An ordinary practitioner would have been motivated to use method as taught by Rheins and Chung with sandpaper to loosen the skin as taught by Rice in order to efficiently remove epidermal skin cells in a non-invasive manner.

(Ans. 8.)

Appellants contend that this rejection constitutes legal error because the portions of Rice relied on by the Examiner fail to address the deficiencies of the rejection of claim 1. (Br. 7.)

As discussed herein we have found no deficiency in the primary combination of references with respect to claim 1. Having no other argument by Appellants, the rejection of claim 12 is affirmed.

5. Claims 16, 17 and 19 stand rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Sakita. We select claim 16 as representative of the rejection before us since Appellants have not separately argued the claims. 37 C.F.R. 41.37(c)(1)(vii).

The Examiner finds that Rheins and Chung do not teach using an apparatus comprising a stick having a surface having longitudinally opposed ends, wherein the surface defines a hollowed out depression having an abrasive surface. (Ans. 9.)

Thus, the Examiner relies on Sakita as teaching this kind of apparatus (see the abstract and Figure 2, where the stick has two longitudinally opposed ends and the surface defines a hollowed depression having an abrasive surface see Figure 2 and the hollowed depressions secure the sample). (Ans. 9.)

The Examiner finds that:

It would have been prima facie obvious to the method as taught by Rheins and Chung with the apparatus as taught by Sakita because Sakita discloses this cell sampler securely holds the collected cells and permits them to be readily smeared onto a slide glass (see col. 2 lines 25-27). An ordinary practitioner would have been motivated to use method as taught by Rheins and Chung with the apparatus as taught by Sakita in order to efficiently remove epidermal skin cells in a non-invasive manner and securely hold the cells until they were secured in a container for downstream processing.

(Ans. 9.)

Claims 16 and 17.

Appellants contend that the portions of Sakita relied upon by the Examiner do not teach or suggest a hollowed out depression that collects loosened and scraped skin cells. (Br. 13.)

The Examiner, however, finds that Fig. 2 of Sakita evidences a stick with a surface which defines a hollowed depression with an abrasive surface. (Ans. 9.) Figure 2 of Sakita is reproduced below.

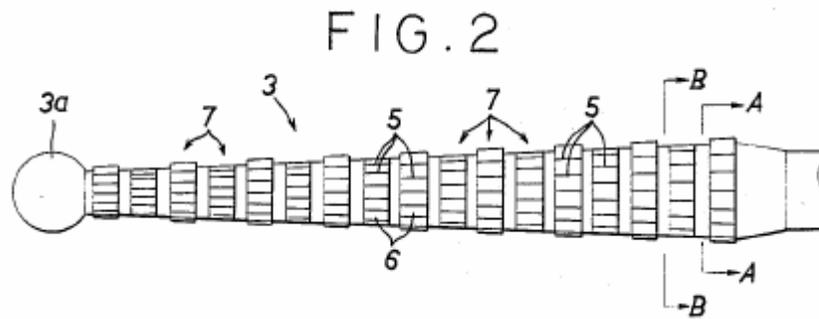


Figure 2 shows an abrading segment of a cell sampler having multiple rows of projections 6, with hollowed depressions between rows of projections. The abrading segments between the hollowed projections “securely holds the collected cells.” (Sakita, col. 3, ll. 53-60.) Thus, we agree with the Examiner that Sakita discloses a hollowed out depression with an abrasive surface, as claimed.

Appellants have failed to rebut the Examiner’s prima facie case of obviousness and the rejection is affirmed.

Claim 19

The Examiner contends that Chung teaches obtaining a loosened skin sample on an adhesive paper and putting that paper with the sample into a liquid buffer in a tube and sealing the tube for DNA extraction. (Chung, col. 5, ll. 5-25; Ans. 16.)

With respect to claim 19, Appellants contend that the Examiner has failed to point out where Rheins, Chung or Sakita disclose a sample which is suspended in a liquid, and then applied to paper prior to being sealed. (Br. 13.) Appellants present no other argument in response to this rejection.

We find the Examiner has presented sufficient evidence to support a prima facie case of obviousness of the subject matter of claim 19 which is un rebutted by Appellants. The obviousness rejection is affirmed.

6. Claims 18, 49 and 50 stand rejected under 35 U.S.C. § 103 as obvious over Rheins and Chung in view of Tyrell. We select claim 18 as representative of the rejection before us since Appellants have not separately argued the claims. 37 C.F.R. 41.37(c)(1)(vii).

The Examiner acknowledges that “Rheins and Chung do not teach placing the sample in a vapor barrier bag with desiccant.” (Ans. 9.) According to the Examiner, Tyrell teaches storing biological samples in a vapor barrier bag with desiccant. (Ans. 9.)

The Examiner finds that

[i]t would have been prima facie obvious to the method as taught by Rheins and Chung with the storage method as taught by Tyrell because Tyrell discloses a biological sample storage package that provides a stable environment for a biological sample (see col. 1 lines 5-10). The sample storage package is compatible with samples such as collection cards or swabs or blood samples (see col. 2 lines 65-67). An ordinary practitioner would have been motivated to use method as taught by Rheins and Chung with the method of storage as taught by Tyrell in order to provide a stable environment in which to house and transport the skin samples.

(Ans. 9-10.)

We find no error in the Examiner’s prima facie case of obviousness.

In response, Appellants contend that Tyrell is non-analogous art for the purposes of claims 49 and 50, arguing there is no evidence of record that a package designed to store blood samples would provide a stable

environment for epidermal samples. (Br. 14-15.) Appellants further argue that the combination of Rheins, Chung and Tyrell do not suggest all the features of the claimed invention. (Br. 14.)

The Examiner argues that Rheins and Chung teach collecting epidermal cells and keeping (storing) the cells for downstream analysis, and that Tyrell teaches the use of a sealed container with a dessicant to store a sample. (Ans. 17.) Thus the Examiner finds that all the features of the claimed invention are disclosed in the combination of Rheins, Chung and Tyrell.

The Examiner argues that Tyrell broadly teaches a storage package for biological samples, and exemplifies blood samples. (Ans. 19.) The Examiner argues that the language “biological sample” does not preclude the sample from being an epidermal sample. (Ans. 19.) We agree with the Examiner’s interpretation of the disclosure of Tyrell and thus do not agree with Appellants that Tyrell is non-analogous art, as Tyrell addresses the preservation of biological samples generally.

In view of the above, the obviousness rejection is affirmed.

SUMMARY

The rejection of the claims for obviousness is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

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Appeal 2008-2248
Application 10/427,985

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