



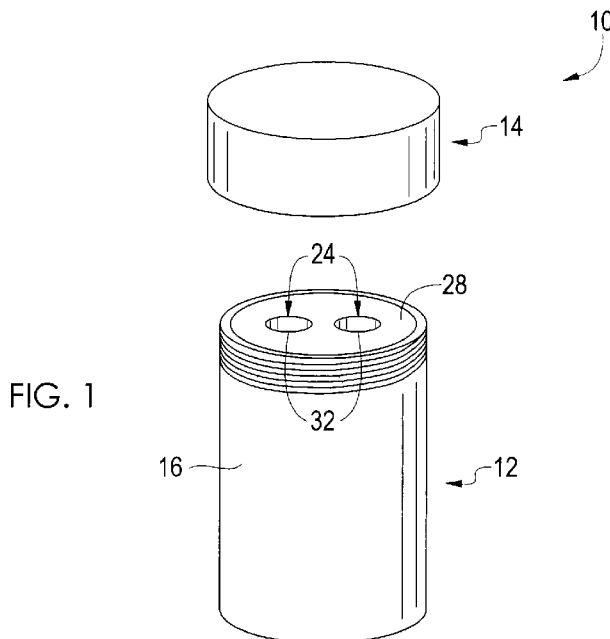
- (51) International Patent Classification:
A61J 1/05 (2006.01) B65D 81/18 (2006.01)
A61J 1/10 (2006.01)
- (21) International Application Number:
PCT/US2012/029892
- (22) International Filing Date:
21 March 2012 (21.03.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/454,762 21 March 2011 (21.03.2011) US
- (71) Applicant (for all designated States except US): THE UAB RESEARCH FOUNDATION [US/US]; 1530 3rd Avenue, South, Ab 770, Birmingham, AL 35294-0107 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): NAHM, Moon [US/US]; 4913 Brandywood Circle, Mountain Brook, AL 35294 (US). BENJAMIN, William [US/US]; 732 47th Way, South, Birmingham, AL 35222 (US).

- (74) Agent: RISLEY, David, R.; Thomas, Kayden, Horstemeyer & Risley, LLP, 400 Interstate North Parkway, Suite 1500, Atlanta, GA 30339 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: TRANSPORT CONTAINERS FOR PRESERVING MATERIAL AT A DESIRED TEMPERATURE

(57) Abstract: In one embodiment, a transport container includes a body that contains temperature preserving material having a melting point of higher than that of water and a compartment adapted to receive a sample of material that is to be maintained at an elevated temperature.



WO 2012/129268 A4

Published:

- *with international search report (Art. 21(3))*
- *with amended claims (Art. 19(1))*

(88) Date of publication of the international search report:
27 December 2012

Date of publication of the amended claims: 7 March 2013

AMENDED CLAIMS

received by the International Bureau on 28 December 2012 (28.12.2012)

Therefore, the following is claimed:

1. A transport container comprising:
a body that contains temperature preserving material having a melting point of higher than normal human body temperature and a compartment adapted to receive a sample of material that is to be maintained at an elevated temperature.
2. The container of claim 1, wherein the body is made of a clear material so that the temperature preserving material can be seen from outside of the container.
3. The container of claim 1, wherein the body is cylindrical.
4. The container of claim 1, wherein the temperature preserving material is a wax material.
5. The container of claim 4, wherein the wax material includes N-docosane, N-eicosane, or both.
6. The container of claim 4, wherein the wax material includes an approximately 50/50 mixture of N-docosane and N-eicosane.
7. The container of claim 1, wherein the temperature preserving material has a melting point of approximately 37°C to 45°C.

8. The container of claim 1, wherein the temperature preserving material has a melting point of approximately 38°C.

9. The container of claim 1, wherein the temperature preserving material includes a heat conducting material.

10. The container of claim 9, wherein the heat conducting material comprises a metal.

11. The container of claim 1, wherein the compartment is a tube adapted to receive a sample vial.

12. The container of claim 1, wherein the body comprises multiple compartments each adapted to receive a sample of material that is to be maintained at an elevated temperature.

13. The container of claim 1, further comprising a lid adapted to attach to the body.

14. A temperature preserving element comprising:
a flexible polymeric bag that is filled with a temperature preserving material having a melting point higher than normal human body temperature.

15. The element of claim 14, wherein the temperature preserving material is a wax material.

16. The element of claim 15, wherein the wax material includes N-docosane, N-eicosane, or both.

17. The element of claim 15, wherein the wax material includes an approximately 50/50 mixture of N-docosane and N-eicosane.

18. The element of claim 14, wherein the temperature preserving material has a melting point of approximately 37°C to 45°C.

19. The element of claim 14, wherein the temperature preserving material has a melting point of approximately 38°C.

20. The element of claim 14, wherein the temperature preserving material includes a heat conducting material.

21. The element of claim 20, wherein the heat conducting material is a metal.

22. The element of claim 14, wherein the temperature preserving material includes an additive that makes the temperature preserving material softer in its solidified state.

23. The element of claim 22, wherein the additive is kaolin.