

WHAT IS CLAIMED IS:

1. A method of preparing a pharmaceutical product in a multiple chamber flexible bag, the method comprising:
 - introducing a pharmaceutical product in a liquid state into a first chamber of the flexible bag through a first port; and
 - lyophilizing the pharmaceutical product within the first chamber of the flexible bag to provide a lyophilized pharmaceutical product,
 - wherein the flexible bag has a second chamber and the first chamber and the second chamber are separated by a breakable seal.
2. The method according to claim 1, further comprising introducing a reconstituting solution into a second chamber of the flexible bag.
3. The method according to claim 1, further comprising introducing a gas into the first chamber and sealing the first port after the pharmaceutical product in the first chamber has been lyophilized.
4. The method according to claim 1, further comprising applying a predetermined amount of pressure to the flexible bag to break the breakable seal between the first chamber and the second chamber; and
 - mixing the reconstituting solution with the lyophilized pharmaceutical product in the first chamber to create a reconstituted pharmaceutical product.
5. The method according to claim 4, further comprising administering the final pharmaceutical product to a patient through an administration port disposed in the flexible bag.
6. The method according to claim 1, wherein the breakable seal is formed between the first chamber and the second chamber by joining a front surface of the flexible bag and the back surface of the flexible bag.

7. The method according to claim 6, wherein the breakable seal comprises a weak point where the breakable seal is not as wide as the rest of the breakable seal, and
wherein the breaking of the breakable seal initiates at the weak point when pressure is applied to the flexible bag.
8. The bag according to claim 1, wherein the pharmaceutical product is a cytotoxic drug.
9. The bag according to claim 8, wherein the cytotoxic drug is selected from the group consisting of: azacytidine, belinostat, bendamustine, brentuximab vedotin, bleomycin, bortezomib, busulfan, carboplatin, cyclophosphamide, cytarabine, dacarbazine, dactinomycin, daunorubicin, decitabine, deferoxamine, doxorubicin, epirubicin hydrochloride, fludarabine, fotemustine, fulvestrant, gemcitabine, idarubicin, ifosfamide, irinotecan hydrochloride, ixabepilone, melphalan, methotrexate, oxaliplatin, paclitaxel, pemetrexed, pentostatin, raltitrexed, romidepsin, temozolomide, thiotepa, topotecan, trabectedin, trastuzumab, and vinblastine.
10. The bag according to claim 2, wherein the reconstituting solution is a 0.9% saline solution.
11. The method according to claim 1, wherein the bag is fabricated from a polyolefine/styrene-block copolymer based film.
12. A flexible pharmaceutical bag comprising:
 - a first chamber configured to hold a lyophilized pharmaceutical product;
 - a second chamber separated from the first chamber, the second chamber configured to hold a reconstituting solution for reconstituting the lyophilized pharmaceutical product in the first chamber;
 - a seal disposed between the first chamber and the second chamber that separates and seals the first chamber from the second chamber; and
 - a first port attached to the first chamber, the first port configured to introduce a pharmaceutical product into the first chamber and allow passage of water vapor from the pharmaceutical product during lyophilization of the pharmaceutical product.

13. The pharmaceutical bag of claim 12, further comprising a second port attached to the second chamber, the second port configured to introduce the reconstituting solution to the second chamber for reconstituting the lyophilized pharmaceutical product in the first chamber.
14. The pharmaceutical bag of claim 12, wherein the seal is a connection between a front surface of the pharmaceutical bag and a back surface of the pharmaceutical bag.
15. The pharmaceutical bag according to claim 12, wherein the seal extends the length of the pharmaceutical bag between the first chamber and the second chamber.
16. The pharmaceutical bag according to claim 12, wherein a predetermined amount of pressure applied to the pharmaceutical bag breaks the seal and connects the second chamber to the first chamber.
17. The pharmaceutical bag according to claim 12, wherein the seal further comprises a weak point to provide an initial breaking point when a predetermined amount of pressure is applied to the pharmaceutical bag.
18. The pharmaceutical bag according to claim 12, wherein the pharmaceutical product is a cytotoxic drug.
19. The pharmaceutical bag according to claim 18, wherein the cytotoxic drug is selected from the group consisting of: azacytidine, belinostat, bendamustine, brentuximab vedotin, bleomycin, bortezomib, busulfan, carboplatin, cyclophosphamide, cytarabine, dacarbazine, dactinomycin, daunorubicin, decitabine, deferoxamine, doxorubicin, epirubicin hydrochloride, fludarabine, fotemustine, fulvestrant, gemcitabine, idarubicin, ifosfamide, irinotecan hydrochloride, ixabepilone, melphalan, methotrexate, oxaliplatin, paclitaxel, pemetrexed, pentostatin, raltitrexed, romidepsin, temozolomide, thiotepa, topotecan, trabectedin, trastuzumab, and vinblastine.

20. The pharmaceutical bag according to claim 12, wherein the reconstituting solution is a 0.9% saline solution.
21. The pharmaceutical bag according to claim 12, wherein the pharmaceutical bag is fabricated from a polyolefine/styrene-block copolymer based film.
22. The pharmaceutical bag according to claim 12, wherein the pharmaceutical bag withstands 121° Celsius.
23. The pharmaceutical bag according to claim 12, wherein the pharmaceutical bag withstands -45° Celsius.
24. The pharmaceutical bag according to claim 12, wherein the second chamber further comprises an administration port for administering a reconstituted pharmaceutical product that is a result of mixing the lyophilized pharmaceutical product and the reconstituting solution.
25. A flexible pharmaceutical bag comprising:
 - a front film;
 - a back film;
 - an outer seal joining the front film to the back film around a perimeter of the pharmaceutical bag; and
 - a breakable seal joining the front film and the back film interior of the outer seal, the breakable seal defining a first chamber and a second chamber separated from the first chamber,
 - wherein the first chamber is configured to hold a lyophilized pharmaceutical product,
 - wherein the second chamber is configured to hold a reconstituting solution for reconstituting the lyophilized pharmaceutical product in the first chamber, and
 - wherein the breakable seal breaks before the outer seal when a predetermined amount of pressure is applied to the flexible pharmaceutical bag.

26. The flexible pharmaceutical bag according to claim 25, wherein the first chamber and the second chamber are defined by the outer seal and the breakable seal.