CLAIMS

1. A sample receiving device comprising:

a vial;

a receptacle in communication with the vial for receiving a sample; and

a cap

wherein the receptacle comprises a first open end for receiving the sample, and a second end for engaging with the vial,

the cap comprises a pusher for engaging with the sample when the sample is in the receptacle, wherein the receptacle comprises a disrupting member for disrupting the sample when the cap engages with the receptacle to expel the disrupted sample into the vial, and wherein the pusher comprises a first end extending from an inner portion of the cap, and a second end for engaging the sample; and

the receptacle comprises a thread for engaging with a complementary thread of the cap to permit the receptacle to attach and secure to the cap.

2. The device of claim 1, wherein the receptacle is a volumetric disruptor.

3. The device of any one of claims 1 and 2, wherein the receptacle has a capacity of about 200 mg to about 2 g of sample, preferably about 400 mg of sample.

4. The device of any one of claims 1 to 3, wherein the pusher expels the sample through the disrupting member of the receptacle.

5. The device of claim 1, wherein the pusher is concave, preferably wherein the second end comprises a lip and a lower end surface.

6. The device of any one of claims 1 to 5, wherein the vial further comprises a mixing means, preferably one or more balls, more preferably ball bearings.

7. The device of claim 1, wherein the disrupting member is convex.

8. The device of claim 7, wherein the pusher is concave.

9. A method of preserving a biomolecule in a biological sample, the method comprising:

a) obtaining a sample;

b) obtaining the device of claim 1;

c) removing the cap from the receptacle attached to the vial;

d) placing the sample in the receptacle;

e) placing the cap over the receptacle;

f) securing the cap with the receptacle, thereby engaging the pusher with the receptacle and engaging the sample with the disrupting member to expel the sample into the vial; and

g) mixing the expelled sample with a composition in the vial for preserving the biomolecule within the sample.

10. The method of claim 9, wherein the mixing step further comprises homogenizing the expelled sample with a mixing means, preferably one or more ball bearings.

11. A system for preserving a biomolecule from a sample, the system comprising:

the sample receiving device of claim 6 wherein the disrupting member is arranged for disrupting the sample when the pusher engages with the sample in the receptacle for expulsion of the sample into the vial; and

a composition in the vial for preserving the biomolecule in the expelled sample;

wherein the mixing means is arranged for homogenizing the disrupted sample once expelled from the receptacle into the vial.

12. A kit comprising:

the device of any one of claims 1 to 8, and instructions for use in preserving a biomolecule from a biological sample.