What is claimed is:

CLAIMS

1. A method for preparing a phospholipid suspension useful for preparing lipid-encapsulated gas microspheres comprising

forming a phospholipid solution that comprises (a) a DPPA, DPPC, and MPEG5000-DPPE phospholipid blend and propylene glycol, and (b) calcium and/or magnesium at a combined concentration of less than 0.7 ppm, wherein the phospholipid blend is formed in the presence of one or two but not all three of methanol, toluene and methyl t-butyl ether (MTBE), and

combining the phospholipid solution with an aqueous solution to form a phospholipid suspension.

2. The method of claim 1, wherein the MPEG5000-DPPE comprises calcium and/or magnesium at a combined concentration of less than 115 ppm.

3. The method of claim 2, wherein the phospholipid blend is formed in the presence of methanol.

4. The method of claim 2, wherein the phospholipid blend is formed in the presence of toluene.

5. The method of claim 2, wherein the phospholipid blend is formed in the presence of methanol and toluene.

6. The method of claim 2, wherein the phospholipid blend is formed in the presence of MTBE.

7. The method of claim 1, wherein the phospholipid blend is formed in the presence of methanol.

8. The method of claim 1, wherein the phospholipid blend is formed in the presence of toluene.

9. The method of claim 1, wherein the phospholipid blend is formed in the presence of methanol and toluene.

10. The method of claim 1, wherein the phospholipid blend is formed in the presence of MTBE.

11. The method of claim 1, wherein DPPA, DPPC and MPEG5000-DPPE are present in the phospholipid solution in a mole % ratio of 10 to 82 to 8 (10:82:8).

12. The method of claim 1, wherein DPPA comprises calcium and/or magnesium at a combined concentration of less than 780 ppm, DPPC comprises calcium and/or magnesium at a combined concentration of less than 90 ppm, and propylene glycol comprises calcium and/or magnesium at a combined concentration of less than 0.7 ppm.

13. A method of ultrasound contrast imaging a subject comprising

preparing a phospholipid suspension according to claim 1,

activating the phospholipid suspension with a perfluorocarbon gas to form lipid-encapsulated gas microspheres,

administering the lipid-encapsulated gas microspheres to a subject, and

obtaining an ultrasound image of the subject.

14. The method of claim 13, wherein the perfluorocarbon gas is perfluoropropane gas.

15. The method of claim 13, wherein DPPA, DPPC and MPEG5000-DPPE are present in the phospholipid suspension in molar percentages of 5-15%, 77-90% and 5-15%, respectively.

16. The method of claim 13, wherein the phospholipid suspension further comprises water, propylene glycol, one or more salts, and one or more buffers.

17. A method for preparing a phospholipid suspension useful for preparing lipid-encapsulated gas microspheres comprising

forming a phospholipid solution by individually combining DPPA, DPPC, and MPEG5000-DPPE with propylene glycol, wherein the phospholipid solution comprises calcium and/or magnesium at a combined concentration of less than 0.7 ppm, and

combining the phospholipid solution with an aqueous solution to form a phospholipid suspension.

18. A method of ultrasound contrast imaging a subject comprising

preparing a phospholipid suspension according to claim 17,

activating the phospholipid suspension with a perfluorocarbon gas to form lipid-encapsulated gas microspheres,

administering the lipid-encapsulated gas microspheres to a subject, and obtaining an ultrasound image of the subject.

19. The method of claim 18, wherein the perfluorocarbon gas is perfluoropropane gas.

20. The method of claim 18, wherein DPPA, DPPC and MPEG5000-DPPE are present in the phospholipid suspension in molar percentages of 5-15%, 77-90% and 5-15%, respectively.

21. The method of claim 18, wherein the phospholipid suspension further comprises water, propylene glycol, one or more salts, and one or more buffers.