CLAIMS

What is claimed is:

1. A composition comprising HFO-1234yf and at least one additional compound selected from the group consisting of HCO-1250xf, HCC-260da, HCC-260db, HCC-240aa, HCO-1230xa, HCFO-1233xf, HCFO-1233zd, HCFC-244bb, HCFC-244db, HFO-1234ze, ~~HFC-245cb,~~ HFO-1243zf, HCFO-1223za, HCFO-1224zb, HFO-1225zc, HCFC-241db, HCFC-242dc, HCFO-1232xf, HCFO-1231xf, and HCFO-1233yf, the composition containing less than about 0.5 weight percent of said additional compound, based on the total weight of the composition, and from about 1 ppm to about 1000 ppm of HFC-245cb.

2. The composition of claim 1 comprising HCFO-1232xf.

3. The composition of claim 2 further comprising at least one compound selected from the group consisting of HCFC-243db, HCFO-1233xf, HCFO-1231xf, HCFC-242dc and HCFC-241db.

4. The composition of claim 1 further comprising at least one compound selected from the group consisting of HCFC-243db and HFC-245fa.

~~5. The composition of claim 1 containing less than about 1 weight percent of said additional compound, based on the total weight of the composition.~~

~~6. The composition of any one of claims 1 through 5 further comprising from about 1 ppm to about 1000 ppm of HFC-245cb.~~

~~7~~5. A composition comprising HCO-1230xa and at least one additional compound selected from the group consisting of:

(a) propylene, HCO-1260zf, HCC-260da, HCC-260db, HCO-1250xf, HCC-250aa, and HCC-240aa; or

(b) HCFO-1232xf and HCFO-1231xf.

~~8~~6. The composition of claim ~~7~~ 5 wherein the additional compound of (a)

comprises ~~comprising~~ HCC-240aa.

~~9~~7. The composition of claim ~~8~~ 5 further comprising as the at least one compound of (a) a compound selected from the group consisting of HCC-250aa and HCC-260da.

~~10~~8. A composition comprising HCFO-1233xf and at least one additional compound selected from the group consisting of propylene, HCO-1260zf, HCC-260da, HCC-260db, HCO-1250xf, HCC-250aa, HCC-240aa, HCO-1230xa, HFO-1243zf, HCFO-1223za, HCFO-1224zb, HFO-1225zc, HCFO-1233yf, HCFO-1232xf, HCFC-1231xf, HCFC-241db, and HCFC-242dc.

~~11~~9. The composition of claim ~~10~~ 8 comprising HCFO-1232xf.

~~12~~10. The composition of claim ~~11~~ 9 further comprising HCFO-1231xf.

~~13~~11. A composition comprising HCFC-244bb and at least one additional compound selected from the group consisting of propylene, HCO-1250xf, HCC-260da, HCC-260db, HCC-240aa, HCO-1230xa, HCFO-1233xf, HFO-1243zf, HCFO-1223za, HCFO-1224zb, HFO-1225zc, HCFC-241db, HCFC-242dc, HCFO-1232xf, HCFO-1231xf, and HCFC-1233yf.

~~14~~12. The composition of claim ~~13~~ 11 further comprising at least one compound selected from the group consisting of HCFC-243db and HFC-245fa.

~~15~~13. The composition of any one of claims 1 through ~~14~~ 12 further comprising HF.

~~16~~14. The composition of any one of claims 1 through ~~14~~ 12 that are acid free.

~~17~~15. A method for producing cooling comprising evaporating a composition of any of claims ~~1 through 5 and 7 through 14~~ 1-12 in the vicinity of a body to be cooled, and thereafter condensing said composition.

~~18~~16. A method for producing heat comprising condensing a composition of any of claims ~~1 through 5 and 7 through 14~~ 1-12 in the vicinity of a body to be heated, and thereafter evaporating said compositions.

~~19~~17. A method of forming a foam comprising: (a) adding to a foamable composition a composition of any of claims ~~1 through 5 and 7 through 14~~1-12; and (b) processing the foamable composition under conditions effective to form a foam.

~~20~~18. A process for producing aerosol products comprising the step of adding a composition of any of claims ~~1 through 5 and 7 through 14~~1-12 to a formulation, including active ingredients in an aerosol container, wherein said composition functions as a propellant.