CLAIMS

What is claimed is:

1. A method of treating a composition comprising a difluoropropene, wherein the difluoropropene is HFO-1252zc, the method comprising contacting the composition with an aluminum containing adsorbent to remove impurities from the difluoropropene.

2. The method of claim 1, wherein the impurities are one or more impurities selected from the group consisting of water, organic compounds, inorganic compounds, acids, gases, particulates and oils.

3. The method of claim 2, wherein the organic compounds are selected from the group consisting of HFC-152a, HFO-1261ze(E), HFO-1261ze(Z), difluorodimethylsilane, HF, HCl, acetic acid, formic acid, nitric acid, sulfuric acid and trifluoro acetic.

4. The method of any one of claims 1 to 3, wherein

   contacting of the composition with the aluminum containing adsorbent reduces a water content of the composition to about 50 ppmw or less, about 40 ppmw or less, about 30 ppmw or less, about 20 ppmw or less, about 10 ppmw or less, about 8 ppmw or less, about 6 ppmw or less, about 4 ppmw or less; and/or

   contacting of the composition with the aluminum containing adsorbent occurs until an organic impurities content of the composition is reduced by about 5% to about 100% relative to a starting content of the organic impurities; and/or

   contacting of the composition with the aluminum containing adsorbent reduces an acidity content of the composition.

5. A method of reducing an acidity content of a composition comprising HFO-1252zc, the method comprising contacting the composition with an aluminum containing adsorbent.

6. The method of any one of claims 1 to 5, wherein the aluminum containing adsorbent is selected from the group consisting of zeolite Y, zeolite X, zeolite beta, zeolite A, zeolite ZK-20, zeolite ZSM-3, faujasite, LZ-10, AW-500, ZSM-5-type zeolites, crystalline silicates such as silicalite, erionite, mordenite, offretite, chabazite, FU-1-type zeolite, NU-type zeolites and LZ-210-type zeolite.

7. The method of any one of claims 1 to 6, wherein the aluminum containing adsorbent is a molecular sieve.

8. The method of claim 7,

wherein the molecular sieve has openings which have a nominal pore size of about 3 Å to about 10 Å, or

wherein the molecular sieve has openings which have a nominal pore size of about 3 Å to about 5 Å, preferably about 3 Å, or

wherein the molecular sieve has openings which have a nominal pore size of about 9 Å to 10 Å, preferably about 10 Å.

9. The method of any one of claims 1 to 8, wherein the aluminum containing adsorbent is zeolite 3A or molecular sieve 13X.

10. The method of any one of claims 7 to 9, wherein the composition comprises HFO-1252zc and one or more additional compounds selected from the group consisting of HFC-152a, HFO-1243zf, difluorodimethylsilane, E-HFO-1261ze, Z-HFO-1261ze, HF and HCl; and wherein contacting of the composition with the molecular sieve reduces a content of at least one of the additional compounds, preferably reduces a content of at least one of HFC-152a, E-HFO-1261ze and Z-HFO-1261ze.

11. The method according to any one of claims 1 to 10, wherein the composition comprises at least one other refrigerant component.

12. The method according to any one of claims 1 to 11, wherein the water content of the composition is reduced by about 90% to about 100% relative to the starting water content.

13. The method according to any one of claims 1 to 12, wherein the treated composition has a reduced water content of about 50 ppmw or less, about 40 ppmw or less.

14. The method of any one of claims 1 to 13, wherein a purity of the composition after treatment is at least 99%.

15. The method of any one of claims 1 to 14, wherein an acidity content of the composition is reduced by about 90% or greater.

16. The method of any one of claims 1 to 13 and 15, wherein the treated composition has a reduced acid content of about 10 ppm HCl equivalent or less.

17. The method according to any one of claims 1 to 16, wherein the aluminum containing adsorbent comprises an aluminosilicate.

18. The method according to any one of claims 1 to 17, wherein the aluminum containing adsorbent is a molecular sieve having a surface area of from about 600 to about 1000 m^2/g.