CLAIMS

What is claimed is –

1. A method of recycling a plastic waste comprising:

(a) feeding a quantity of a PET-containing reclaimer colored plastic-containing mixture and/or MRF colored plastic-containing mixture separated from said plastic waste to a chemical recycling facility; and

(b) depolymerizing in said chemical recycling facility at least a portion of said PET-containing reclaimer colored plastic-containing mixture and/or MRF colored plastic-containing mixture;

further comprising feeding at least a portion of said quantity of colored plastic-containing mixture to at least one density separation stage before said depolymerizing (b), thereby producing a PET-enriched stream that is fed into a solvolysis facility within said chemical recycling facility,

wherein said at least one density separation stage comprises a sink-float separation stage and/or a centrifugal density separation stage.

2. The method of claim 1, wherein said quantity of colored plastic-containing mixture comprises at least 1 and/or not more than 99.9 weight percent PET on a dry basis.

3. The method of claim 1, wherein said quantity of colored plastic-containing mixture comprises at least 1 weight percent non-clear PET on a dry basis.

4. The method of claim 1, wherein said quantity of colored plastic-containing mixture comprises not more than 10 weight percent halogens on a dry basis.

5. The method of claim 1, wherein said quantity of colored plastic-containing mixture comprises at least 1 weight percent and/or not more than 90 weight percent polyolefins on a dry basis.

6. The method of claim 1, wherein said quantity of colored plastic-containing mixture comprises at least 0.1 weight percent non-clear PET and/or other colored plastic material on a dry plastic basis.

7. The method of claim 1, wherein said quantity of colored plastic-containing mixture further comprises at least 0.1 weight percent PVC, nylon, and/or copolyesters on a dry basis.

8. The method of any one of claims 1 to 7, wherein said at least one density separation stage comprises at least two density separation stages.

9. The use of a PET-containing colored plastic-containing mixture as a feedstock to a chemical recycling facility, wherein said PET-containing colored plastic-containing mixture has undergone at least one density separation stage,

wherein said at least one density separation stage comprises a sink-float separation stage and/or a centrifugal density separation stage.