

Exercise 1.14

Classify each of the following as a pure substance or a mixture. If a mixture, indicate whether it is homogeneous or heterogeneous: **(a)** air, **(b)** tomato juice, **(c)** iodine crystals, **(d)** sand.

Solution

- (a)** Air is a homogeneous mixture because you can't see the different gases (nitrogen and oxygen gas, for example) it consists of.
- (b)** Tomato juice is a homogeneous mixture because it looks like just a red liquid throughout.
- (c)** Iodine crystals are completely pure solid iodine. It's a pure substance (an element).
- (d)** Sand is a heterogeneous mixture because sand varies in texture in appearance, depending where it's found.