

Matter

Pure Substances
only 1 type of matter
in it

Elements
1 type of atom

118 elements
- 92 occur naturally
- 26 man-made

4 new elements
- 113 Nihonium (Nh)
- 115 moscovium (Mc)
- 117 Tennessine (Ts)
- 118 Oganesson (Og)

26 iron (Fe - ferrum)
82 lead (Pb - plumbum)
74 tungsten (W - wolfram)
47 silver (Ag - argentium)

cannot be broken
down by physical or
chemical changes
- only nuclear

water - boils @ 100°C
alcohol - boils @ 72°C

Compounds
2 or more elements
chemically bonded
together

can be broken
down by
chemical
changes

H₂O - water
C₁₂H₂₂O₁₁ - sugar
NaCl - salt
C₈H₁₀N₄O₂ -
caffeine

Mixtures
Physically
bonded
together

Heterogeneous mixtures

not uniform

Ex) trail mix
dirt
granite
chicken noodle
soup

Homogeneous mixtures
(Solutions)

look uniform

Ex) Dt. Pepsi
milk
listerine
bronze (Cu + Sn)
alcohol

separate a mixture
by physical changes

- 1) by hand
- 2) by magnet
- 3) by filtration
- 4) by chromatography
- 5) by distillation

