

WorksheetCloud: WORKSHEET

Grade 8

Subject: Natural Sciences

Topic: Investigating density of liquids

INFORMATION SHEET

density = mass \div volume

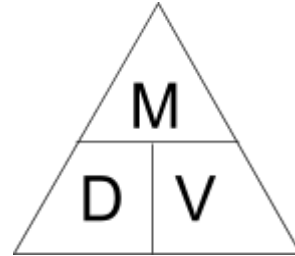
mass = density \times volume

volume = mass \div density

The units for density are:

grams/cubic centimeter (g/cm^3) or $\text{g}\cdot\text{cm}^{-3}$

kilograms/cubic metre (kg/m^3) or $\text{g}\cdot\text{m}^{-3}$



Substance	Density (g.cm ⁻³)
Platinum	21,50
Gold	19,20
Mercury	13,60
Lead	11,30
Silver	10,50
Copper	8,90
Iron	7,90
Zinc	7,10
Diamond	3,50
Aluminium	2,70

Substance	Density (g.cm ⁻³)
Glass	2,50
Magnesium	1,70
Perspex	1,20
Milk	1,03
Water	1,00
Cooking oil	0,92
Ice	0,91
Candle wax	0,87
Pine-wood	0,54
Cork	0,24

MATERIAL	DENSITY (g/cm ³ or g/mL)
Rubbing alcohol	0.79
Lamp oil (refined kerosene)	0.81
Baby oil	0.83
Vegetable oil	0.92
Ice cube	0.92
Water	1.00
Milk	1.03
Dawn dish soap	1.06
Light corn syrup	1.33
Maple Syrup	1.37
Honey	1.42

Activity 1

Study the information regarding the following substances and then answer the questions. Consult the table of densities where necessary.

Liquid	Solid	Density
A		$0,7\text{g}\cdot\text{cm}^3$
B		$1,0\text{g}\cdot\text{cm}^{-3}$
C		$13,6\text{g}\cdot\text{cm}^{-3}$
	D	$0,6\text{g}\cdot\text{cm}^{-3}$
E		$20,0\text{g}\cdot\text{cm}^{-3}$
	F	A rectangular block with mass 30g, length 3cm, breadth 2 cm and height 1 cm
G		The mass of 120cm^3 is 144g

1. Will liquid G float on liquid A?
2. Identify the pure liquid B
3. Is liquid C a metal or a non-metal? Specify
4. Which one of the solids has the highest density?
5. In which of the liquids, B or G, will D float deeper?
6. Is the statement: F will float on C but will sink in A, true?
7. If A, B and C are poured into the same beaker, C will form the bottom layer and B will float on top. True or False?