

# **Badische Landesbibliothek Karlsruhe**

**Digitale Sammlung der Badischen Landesbibliothek Karlsruhe**

## **The young man's book of amusement**

**Halifax, 1848**

Tabelle: Table of Specific Gravities

[urn:nbn:de:bsz:31-100120](https://nbn-resolving.org/urn:nbn:de:bsz:31-100120)

beam, weigh it first accurately in air, setting down with a pen the weight in grains and decimal parts; then place under it a glass vessel, pouring water in till it be filled to within three quarters of an inch from the brim. And immerse the body in the water, suspended by the horse hair to the hook at the bottom of the water scale. In this proceeding, we must take care that the same weights that balanced the body in air be in the opposite scale, and likewise the proper *balance water weights*, and that no air-bubble adhere to any part of the substance in the water, which will render it apparently lighter. The *opposite* scale to that which contains the substance will now greatly preponderate; weights should therefore be put into the scale till the equilibrium be restored.

The pen will now finish the operation. Divide the weight in air by the loss in water; that is, divide the number of grains in the large scale by those in the small one, and the quotient will shew the specific gravity, or how many times heavier the substance that was weighed is than water. If the weight in the small scale be *subtracted* from that in the other, it will shew the *respective gravity* of the weighed substance, or the weight with which it will be evenly balanced in water.

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*Table of Specific Gravities.*

Refined gold .....	19.640
English guinea .....	18.888
Mercury .....	14.019

Lead.  
Refine  
Copper  
Ham  
Cast  
Elasti  
Soft  
Iron.  
Pure  
A dia  
Islan  
Rock  
Com  
Fine  
Stone  
Brick  
Nitre  
Alab  
Dry  
Brim  
Alum  
Oil o  
Hone  
Gum  
Aque  
Pitel  
Hum  
Ambe  
Milk  
Urine  
Dry  
Sea-w

Lead.....	11.344
Refined silver .....	11.019
Copper from Sweden.....	8.843
Hammered brass.....	8.849
Cast brass.....	8.100
Elastic steel.....	7.820
Soft steel.....	7.738
Iron.....	7.645
Pure tin.....	7.471
A diamond.....	3.400
Island crystal.....	2.720
Rock crystal.....	2.650
Common glass.....	2.620
Fine Marble.....	2.704
Stone of mean gravity.....	2.500
Brick.....	2.000
Nitre.....	1.000
Alabaster.....	1.875
Dry ivory.....	1.825
Brimstone.....	1.800
Alum.....	1.714
Oil of vitriol.....	1.700
Honey.....	1.450
Gum arabic.....	1.375
Aquafortis.....	1.300
Pitch.....	1.150
Human blood.....	1.126
Amber.....	1.040
Milk.....	1.030
Urine.....	1.030
Dry box-wood.....	1.030
Sea-water.....	1.030

Common water.....	1.000
Bees-wax.....	0.955
Linseed oil.....	0.932
Oil, olive.....	0.913
Spirit of turpentine.....	0.874
Rect. spirit of wine.....	0.856
Cork.....	0.240
Air.....	0.004

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*Experiment with the Syphon.*

If one leg of a syphon be immersed in a vessel of water, and the other leg hang out of it, in such manner that the lower end be below the surface of the water; on opening both the orifices at the same instant, the water will be found to flow out at the lower orifice, till its surface has sunk down to the orifice of the leg in the water.

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*Tantalus's Cup.*

Several entertaining deceptions have been practised by means of the Syphon. One of the most usual is that of Tantalus's Cup, but the explanation of which is not necessary here, as its operation will be evident at the first view. It is usual to conceal the syphon in the figure of a man representing Tantalus; and when the cup is filled with water as high as his

mouth, that  
the latter be  
whole conten  
been practis  
of a drinkin

PROCEUR  
on pedest  
thin tube,  
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go up to t  
the end of  
head, be c  
comes to t

Now wh  
of one ha  
length of t  
any one pla  
It is not ne  
lips of the  
to the ear, a