

Gas Volumes

Chemistry

Calculating gas volumes at RTP, STP and other conditions.

Standard conditions and molar volumes.

Condition	Definition	Molar volume
RTP	25°C, 100 kPa	24.0 dm ³
STP (modern)	0°C, 100 kPa	22.7 dm ³
STP (older)	0°C, 1 atm	22.4 dm ³
Any conditions	$PV = nRT$	Calculate

Avogadro's law: equal volumes of gases at the same temperature and pressure contain equal numbers of molecules — whatever the gas.