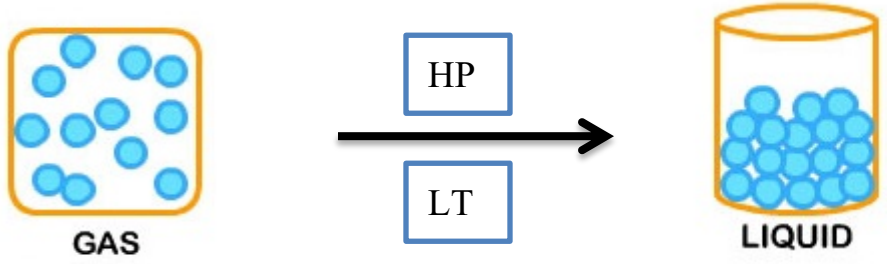
States of matter

गैसों का द्रवण (Liquefaction of gases)

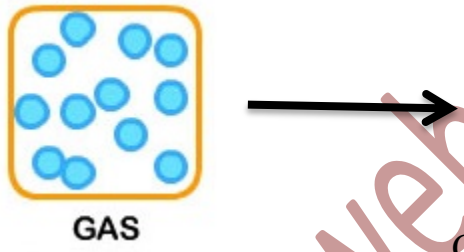


HP = high pressore

LT = Low Temp.

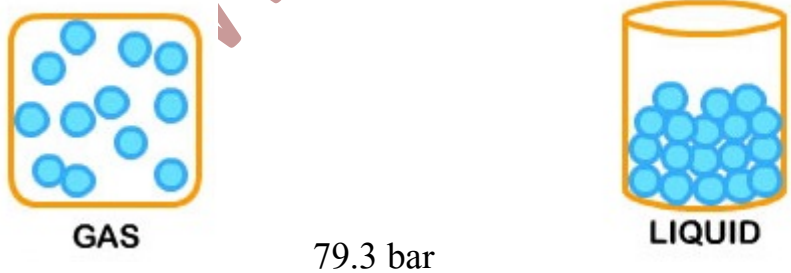
Means A gas can be liqufied both by increasing pressure & decreasing Temp.

(अर्थात एक गैस को उच्च दाब एवं निम्न ताप पर द्रवित किया जा सकता है)



Co_2 gas can not liqufied at 35°C How so much pressure we apply.

Co_2 (35°C)



79.3 bar

Co_2 (31.1°C) → Co_2 (Liquid)

Means Co_2 can be liquied at 31.1°C

Means In liquefaction of gases is more than significant

यहाँ से 3 parameters हमें पढ़ने है |

Critical Temp.	**Critical pressure**	**Critical volume**
T_c	P_c	V_c
The Temp. above which a gas cannot be liquefy how so much pressure we apply **T=$\frac{8a}{27Rb}$**	The pressure of gas at T_C is known as Pc **Pc= a/27b^2**	The volumes of 1 molar gas at Tc & Vc known as Vc **Vc =3b** **Trick- c** comes at 3 position alphabetically and V=b NOTE= a & b are wonder as cons

NOTE:- Tc, Pc & Vc are different for different gases for Ex.

Co_2 - Tc Pc Vc

31.1°C 79.3 bar .....

Critical Temp.	**Boyle's Temp**	**Inversion Temp**
T_c	T_c	T_i
T_c	The Temp. at which a real gas behaves as an ideal gas is k/n as Boyle's Temp. T_B	It is the double of Boyle's Temp. T_i
$=\frac{8a}{27Rb}$	$=\frac{a}{Rb}$	$=2\frac{a}{Rb}$

I can say

$$T_i = 2 \times T_B$$

Notes be prepared by

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For all comp.

Ex. – NEET, AIIMS, IIT

Q. – A gas can be liquefy ?

(a) Above T_C Above P_C

(b) Above T_C Below P_C

(c) Above T_C Below P_C

(d) Below T_C Above P_C

Trick – G l ACP को याद रखिये |

CID में जैसे ACP प्रमुख है
वैसे ही कैमेस्ट्री में गिरधारी
लाल ACP है |