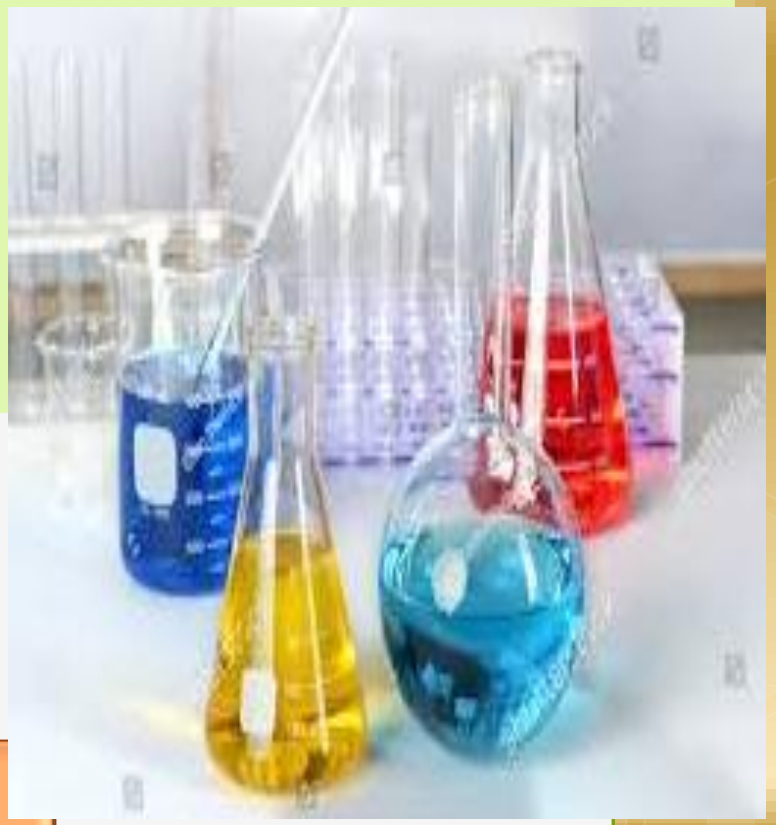
STOCK SOLUTION



Prepared by :
Lecturer Nora Zawar
Lecturer Ashti Mohamed

STOCK SOLUTION

- Are solutions of known concentration, these solutions are strong solution from which weaker solution are prepared. Stock solution is prepared on weight in volume basis and their concentration is expressed as a ratio and sometimes percentage.

Examples

Rx

Atropine sulfate		gr III
Sodium bicarbonate		gr V
D.W.	q.s	f℥ I

- Stock solution of atropine sulfate available is 1:20 (w/v)

Calculation

- gr III = 3/15 = 0.2gm of atropine sulfate.
- gr V = 5/15 = 0.3gm of sodium bicarbonate.
- fʒ = 30 ml →
- 1 gm/0.2gm=20ml/x x= 4ml stock sol.
- 30 x ¾ =22.5ml
- 22.5 – 4 = 18.5ml

Procedure

- Weigh 0.3gm of sodium bicarbonate and put it in a beaker.
- Dissolve the content of the beaker in 18.5ml D.W.
- Add 4ml of stock solution into the beaker.
- Transfer the content of the beaker into a measuring cylinder and complete the volume to 30ml by D.W.
- Convert the content of the measuring cylinder into a wide mouth bottle and put the suitable label.

Rx

K. permanganate 0.5%
NaCl 0.2gm
D.W. ad 50ml

Stock solution of K. permanganate available is 1:50

Calculation

$$\frac{0.5gm}{x} = \frac{100ml}{50ml} \} x = 0.25gm\ of\ K.permanganate$$

$$\frac{1gm}{0.25gm} = \frac{50ml}{x} \} x = 12.5ml\ of\ stock\ solution\ used$$

50 x ¾ = 37.5ml

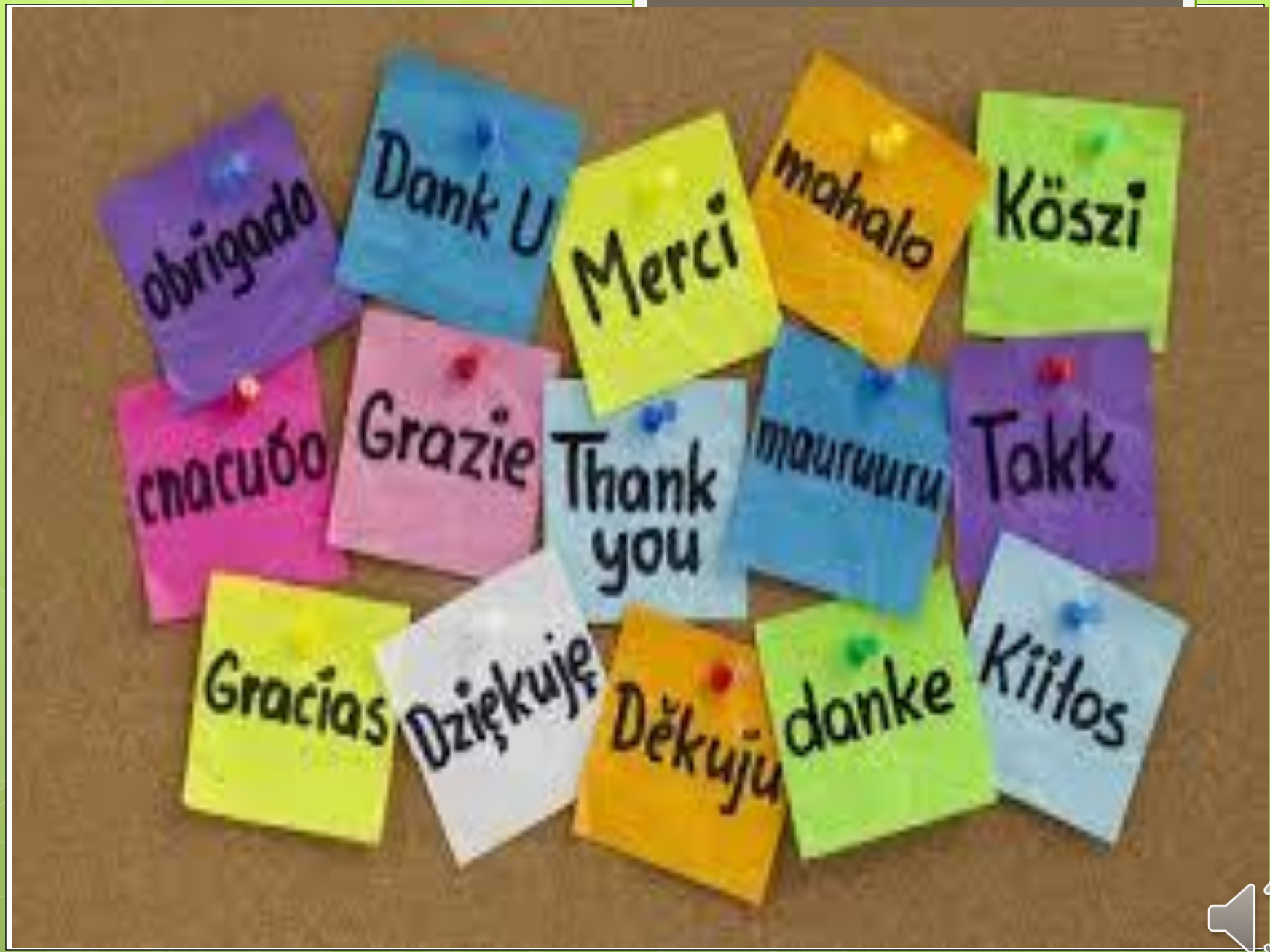
37.5 – 12.5 = 25ml

Procedure

Dissolve 0.2gm of NaCl in 25ml of D.W. then add 12.5ml of stock solution then complete the volume to 50ml with D.W.

- How many mls of 1:200 stock solution should be used to make 500ml of 1:800 solution?
- 1:200 = 0.5%
- 1:800 = 0.125%
- $C_1V_1 = C_2V_2$
- $0.5\% \times V_1 = 0.125\% \times 500ml$
- $V_1 = 125ml$

- How much K. permanganate should be used in preparing 30ml of a solution such that 10ml diluted to 250ml will yield a 1:1000 (w/v)?
- 1gm/x= 1000/100 → x= 0.1%
- $C_1V_1 = C_2V_2$
- C_1 X 10ml = 0.1% x 250ml
- C_1 = 2.5%
- 2.5gm/x=100ml/30ml → x=0.75gm of K. permanganate .


obrigado
Dank U
Merci
mahalo
Köszi
спасибо
Grazie
Thank you
mauruuru
Takk
Gracias
Dziękuję
Děkuju
danke
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