	Date
Expt	Page No
	Aim Mala
	To study the effect of various factor on the rate of filtration.
	on the rate of filtration.
	Référence:
	Requirements:
	· Glasswares : Beaker, filter paper, measuring
	· Glasswares :- Beaker, filter paper, measuring eylinder, funnel, wire gauge.
	· Chemicals : Calcium carbonate.
	Theory!
	Principle: Filtration is a process where
	solid particle suspension are separated
	forom liquid or gas employing porous media
	forom liquid or gas employing porous media which retain a solid particle but allow
	the fluid to pass through a volume of
	filtration obtain through the filter paper per unit time is called rate of
	per unit time is called rate of
	filtration.
	V
	Teacher's Signature

## Obscription:

S.No. Sample Jime taken Vol. of billerate Rate of filteration

1. Sy.(alos 197 see 40 ml 0.20 ml/sec

2. 10.1.(alos 300 sec 40 ml 0.13 ml/sec

Calculation:

Rate of filteration = Vol. of biltonate Time taken

(i) 51. CoCO3 = 40 ml = 0.20 ml/sec

(ii) 101. CaCO; = 40 0 = 0 13 ml/sec.

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$e_{g}:-\left \frac{dv}{df}\right =K.A\Delta P/UL$	- darey's law
where,	
A = Area of filter,	
V = Volume of filter,	<b>→</b>
K = Constant, DP = Pressure drop acro	is the filter media
and cake.	
L = Viscocity of filtera	fed
t = Time of filtrati	ion .
- Third sop - you care	
Procedure:	
i) Effect of thickness of a	ake:
Prepare two solution of	calcium carbonate
Perepare two solution of using water as solvent to solution are 5% and 10%	he concentration of
Filter them and note th	e time taken for
Filter them and note the filtration to calculate to filtration and compare	re race of
guranon una confecca	ma will

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					Date
Expt	t. No <b>L</b>				Page No3
	Pereparation Accurately				
- 1					and dissolve
	Preparation				
	Accurately into 50 m	weigh of c	istilled	Caloz a water.	nd dissolve
	(Result! -				
	The study was such laboratory	of elly	bect of perfor	rate of	filtration the
	, , , , , , , , , , , , , , , , , , , ,	,	Teac	her's Signature	

10.00	Date	
Exp	Page No	4
	(Aim) quelab	
	To study the elibert of viscosity on the rate of filtration.	L
	Reference:	
	Requirements:	
Ó	Apparatus: Beaker, filter paper, measuring cylinder	2
Ъ	Glass Chemical: - Glycerine, CaCO3, distilled	
	Theory!	
	Principle: - Filtration is a process where	solid
	particle suspension are separated berom lig	ruid
	or gas employing porous media which re a solid particle but allow the fluid to	pais
	through volume of filteration obtain through the filter paper per unit time is cal	led
	rate of filtration.	-
	eg! +   dv = KA.DP/ML - darey's lan	ω,
		, , ,
	Teacher's Signature	

## Observation:>

S No.	Sample	Time taken	Volume of filtration	Rate of Fil
1.	51. (a(0)	342 sec	45 ml	0.13 ml/se
2	51.6003	679 sec	45 ml	0.06 ml/se
	Chycenie			

## Calculation!

and is sleen

Rate of bilteration Not of filterale

11) 5.1. Colo3 = 45 ml = 0.13 ml/sec

(ii) 5.01. (all) + Odycerine in 95.00 ml /sec.

- 1212/20.4X = N

	Date
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	where,  A = Area of filter,  V = Volume of filter,  K = Constant  Al = Pressure drop across the filter media, and  cake,  M = Viscosity of filterated,  L = Thickness of cake,
	L = Thickness of cake, & = Time of filtration.
	Perocedure!
(1)	Take all glasswares and clean it and dry it.
(ii)	Pereparation of 5% Ca(Oz solution: >a) Take 2.5 gm of CaCOz and dissolve into So ml of distilled water then poepare 5% of solution of Ca(Oz.
(iii)	Preparation of mixture of glycerine water and calcium carbonate.  (a) Take 2.5 gm of Ca(0, and dissolve it into 40 ml of distilled water. Now add 10 ml of glycerine in this mixture.
(j v)	After preparation of solution filter with filter paper and note the time for filtration to calculate the rate of filtration and compare them.  Teacher's Signature

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Re	sult:					
Th su	e study uccenfully	ob ebb perform	red in	rate of The labor	filtration	was
	, , , , , , , , , , , , , , , , , , , ,					
				Teacher's Sign	nature	