Title: Qualitative Organi	ie Chemistry.	Total Live
	V	en organic compound
Aim: To identify the el	s functional group.	Ma [E (CH))
Experiment	Observation	Inference
1. Soda line test:	Smell of NH3:	Nitrogen is present.
Heat substance and soda lime (1:2) in a test type.	las turns red litmus blue	Leon + Zeon
	(b) furns mercurous nitrate paper black.	Ness + Consc
1 DEA + OLIGH - DOLL		De Aquer est
Lassaigne. 'S Test : Fuse a little amount of	I and the OLLOW .	edoll + DU SA
substance with a free-size. metallic solution in a	phros)	clo + trantage by
fusion tube. Heat gently at	clar collett	1,000.00
the melt with distilled	¥	NO + SAU L
water and filter.	3 olyier)	

1. CH3CONH2 + NAOH CAO CH3COONA + NH3/1

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Experiment	Observation	Inference
		J
a) To 5 ml of filtrate, add 2-3 drops	Blue / green précipitate	Nitrogen present.
of NaOH, 1-2 drops of FeSO, and	or colouration	
boil. Add 2-3 drops of Fellz and	(prussian blue)	The the state
acidity with HCI.	a religion of the	1 (0)
1 14 to 11 12 1700	119 + HBHUT IT	Tier chice
b) To a part of fit filtrate, add	Violet precipitate	Sulphur present
fresh solution of sodium nitroprusside.	14)	1 1
To another part, acidify with acetic	Black precipitate	Sulphur present
acid and add lead acetate solution	A CONTRACTOR OF THE PARTY OF TH	1 - 1 - 1 - 1
to the second of	THE RESERVE	1
To a 2 ml solution of filtrate, add	is Curdy white precipitate	is Chlorine present
dil. HNO, and boil for a few minutes.	1 V 1 1	1
Cool and add AgNOz solution.	- HOACH ALD HI	present.
	<u> </u>	
d) To a 2 ml of filtrate add H2504, then	is Organic layer turns	Iodine present
few drops of fresh chlorine water	yellow violet.	
and 2 ml of CHC13 or CC14 or CS2	iis Organic Layer turn	Bromine present
and shake well.	Yellow	,
If the organic layer is reiolet, add		
more chlorine water and shake well	Organie Layer turns	Iodine and Bromine
until colour is discharged	yellow	both present
<u>Krester</u>	Teacher's Signature :	

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a) Na + C + N \longrightarrow Na CN \longrightarrow Na₄ [Fe (CN)₆] + Na₂ SO₄

Na₄ [Fe (CN)₆] + Fe³⁺ \longrightarrow Fe₄ [Fe (CN)₆]₃

(prussian blue)

Na2S + (CH3COO)2Pb -> 2CH3COONA + PBSt (Hack)

(eurdy yellow)

Ag NO3 + NaBr → NaNO3 + Ag Br I

(eurdy yellow)

(d) 2 NaBr + C12 -> 2NaCl + Br2

(yellow colouration)
of organic layers | tell det room |

2 Na2 + Cl2 -> 2 NaCl + I2 lettlich them est (violet colouration) bour melicul of organic layer)

- 1	Experiment	Observation	Inference
3.	Test for - COOH group:	11.15.11.14	
- 0	Test a little of the sample with blue	Blue litmus turns red	
6.	ditmus	+ + +	- COOH gro
<u>i</u>) Dissolve or suspend the sample in water,	Effervescence with	present
	add solid or aqueous solution of	evolution of eoz	
	NaHCOz, small quantity at a time.		
	and the second of the second		
4.		@Reddish colouration or	
	Dissolve the substance in water or alcohol	pricipitate.	CANDOXYLIC ACIO
	and add a drop of FeC13 solution	(ii) Green, blue or violet	1
		colouration	Alond history
- 1	the second secon		
5,	Test for Ester group:	101.5 to golid	- cook gro
	ldd two beads of Nath to a write of the	None -	present.
le	amble in Holum. minimum was mare		
	water and boil for a per warmen.		
	Cool and then acidify with		
	d'lute HCI.		

3. b) CH3-COOH + NAHCO3 -> CH3-COONA + H20 + CO21

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are a first pergent to be girl for equal to a black

4. i) CH3 COOH + NH4OH -> CH3 COONH4 + H2D

3 CH3 COONH4 + FeCl3 -> (CH3COO)3 Fe + 3 NH4Cl

(red colouration)

4. (ii) OroH + Fects -> Hel + Orofecto

5. CH3 COO CH2 CH3 + NaOH → CH3 COONA + CH3 CH2 OH

Incomen and it on the regard observed in medt, odd has ability to im & a december with an extent to extent we

through winded to delight while parties lake startly to while to the

xpt. N	No	Page No	
	Experiment Oche 1011 1 - (0) 21	Observation	Inference
	Test for Carbonyl group: 2,4-DNP test - To a small portion of	Orange or red	Carbony gr
	alcoholic solution of the substance or to a small amount of the	precipitate.	bresont (>C=0 or -0
	sample, add minimum quantity of glacial acetic acid, warm till clear solution		
	solution of 2,4-dinitrophenyl hydrazine		
	Shake gently and heat to boiling of for few minutes. Allow to cool. If	- HOALA I O	HODS (D
	of conc. H, 50g. Warm for about		The second
	five minutes again and seratch inside of the test tube with a	OUH FIELD	Les R Gord
	glass rod. Cool and allow to stand.		

6. CH_3 CH_3

		Observation	Inference
	Experiment	(POLOCO POLOCO	J
		O II	77.9
Ĭ	Test for primary amine:	1011	W-(0)
	Diazo reaction - Add a pinch of	Ammediately brilliant	
	Nanos to a well cooled HCI	scarlet or red	present
	solution of the sample. Then bour		
	a little of diazotised volution	110	
	: L and alkaline	imace los (5) +	Busu(0)
	into excess of cold alkaline.	01-19 114 (0)	
	solution of B-napthol.		
	* * *	1124	
8.	Test for amide group:	Stud	MO2
	is Heat 0.5 g of the sample with	is Smell of NH3 - which	J (9)
	2 ml 50% Nath solution	turns Hg (NO3)2 paper	
	2 ml 50%. NaoH solution	black black	- CONH, grow
		ii, No gas evolves	bream
	is Treat a little of the agreeous	1 116 (5)	m=i1(0)
	solution of the sample with a	14 (5)	V 4204
	few drops of cold solution of	The state of the s	
	few drops of cold solution of HNO, (HCI and NaNO2).		

Experiment O>NH2 + HONO 243-278K $\frac{dil. Na oH}{O} = 0$ $\frac{dil. Na oH}{O} = 0$ Scarple, and minimum purply of glored autic acid, warm till oben solution brokents for and I will structured assurbed throughouthing the to work producers 8. (1) RCONH2 + NOOH R COONA A NH3 Town potting extents for four orientes. Allow to cool if no procipilate appears, add 2 drops of core 1250g. Down for about (i) R CONH2 + HNO2 RCOOH HENRY HOUNEN SHIP isside of the tist tube with a

Expt. No2	Page No&

	Experiment	Observation	Inference
9	The Proposition amide (anilide):		
	Test for substituted amide (anilide): Hydrolyse 50 mg of the sample	Immediate builliant	Substituted amide
	by boiling with 5 ml of conc.	1	group present.
	minutes, cool, dito dilute with		
	neater and penform diazo reaction.		
10.	Test for nitro group:		
	comple with a dem hieres of	îmmediate brilliant scarlet	-Noz group is
	netallie tin and 5 ml of conc.	or red precipitate	,
	HCI till the reaction is complete.		
	perform diaxo reaction.		
	[Perform this test when -NH2] and R-CONH-Ar group are		
	and R-CONH-Ar group are absent.		

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Teacher's Signature :

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$$\begin{array}{c} O \\ \hline O \\ \hline N \equiv NCI \\ \hline \end{array} + \begin{array}{c} O \\ \hline O \\ \hline \end{array} \begin{array}{c} dil. \ NaOH \\ \hline O \\ \hline \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c} O \\ \end{array} \end{array} \begin{array}{c} O \\ \end{array} \begin{array}{c}$$