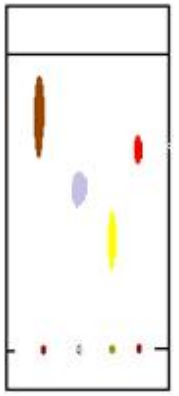
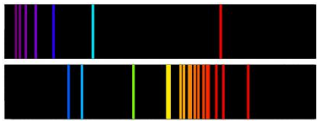
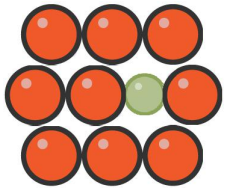
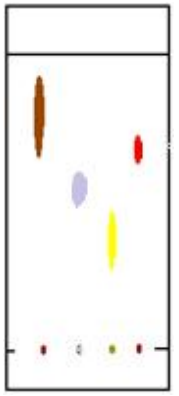
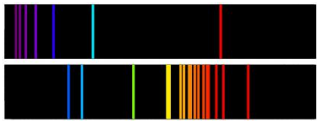
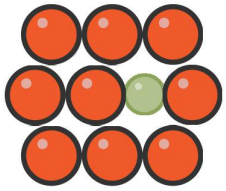
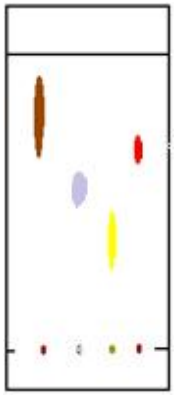
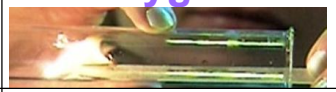
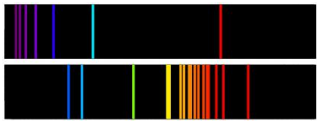
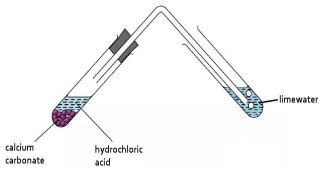
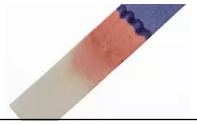
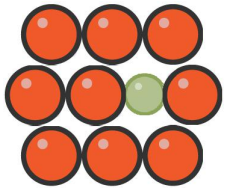
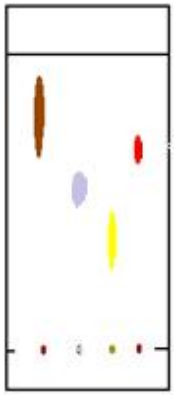
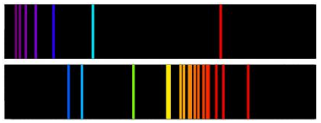
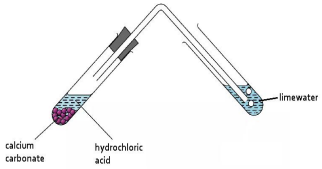
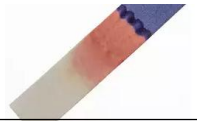
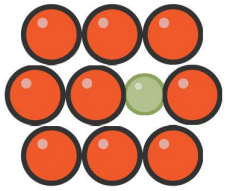
H	1	2	3	4	5	6
1	**Pure**	Melting/boiling point	$NaOH_{(aq)}$ + $CUSO_{4(aq)}$ → ?	$\frac{\text{distance substance moved}}{\text{distance solvent moved}}$		*Flame test on a mixture of ions?*
2	Test for oxygen	Formulation	*e.g. fuels, paints, medicines & cosmetics*	$BaCl_{2(aq)}$		
3	*Stationary phase*	*Flame test*	Test for hydrogen	*Silver nitrate solution*	NO_3^-	*Can orange juice be pure?*
4	Test for carbon dioxide	R_f value	*Reaction of carbonate and HCl*	*Mixture*	Silver iodide	*Flame emission spectroscopy*
5	Sodium hydroxide solution	*cations*	*Separation*	Mobile phase	Increased accuracy, sensitivity and speed	*Calcium hydroxide solution*
6	*Red flame*	Orange - red flame	*Test for chlorine*		Brown precipitate	*Chromatography*

H	1	2	3	4	5	6
1	**Pure**	Melting/boiling point	$NaOH_{(aq)}$ + $CUSO_{4(aq)}$ → ?	$\frac{\text{distance substance moved}}{\text{distance solvent moved}}$		?
2	Test for	Formulation	*e.g. fuels, paints, medicines & cosemtics*	$BaCl_{2(aq)}$		
3	*Stationary phase*	*Flame test*	?	*Silver nitrate solution*	?	*Can orange juice be pure?*
4	Test for carbon dioxide	R_f value	*Reaction of carbonate and HCl*	?	*Silver iodide*	*Flame emission spectroscopy*
5	?	*cations*	*Separation*	**Mobile phase**	**Increased accuracy, sensitivity and speed**	*Calcium hydroxide solution*
6	*Crimson flame*	?	*Test for chlorine*		*Brown precipitate*	*Chromatography*

F	1	2	3	4	5	6
1	not mixed or contaminated with any other substance or material	Melting/boiling point	Sodium hydroxide + copper (II) sulfate → ?	$\frac{\text{distance substance moved}}{\text{distance solvent moved}}$		*Flame test on a mixture of ions?*
2	Test for oxygen 	Formulation	*e.g. fuels, paints, medicines & cosemtics*	Barium chloride solution		
3	*Stationary phase*		*Separation*	*Silver nitrate solution*	**Carefully measured quantity of each component**	*Can orange juice be pure?*
4	Test for carbon dioxide	R_f value		*Mixture*	**Silver iodide**	*Flame emission spectroscopy*
5	**Sodium hydroxide solution**	***Cations, e.g. Na^+, Mg^{2+}***	'squeaky pop' test	**Mobile phase**	**Increased accuracy, sensitivity and speed**	*Limewater*
6	*Lithium flame test result*	Orange - red flame	*Test for chlorine* 		**Green precipitate**	*Chromatography*

F	1	2	3	4	5	6
1	not mixed or contaminated with any other substance or material	Melting/boiling point	?	distance substance moved / distance solvent moved		Flame test on a mixture of
2	Test for	Formulation	*e.g. fuels, paints, medicines & cosemtics*	?		
3	?		Separation	Silver nitrate solution	Carefully measured quantity of each component	Can orange juice be pure?
4	Test for carbon dioxide	Rf value		Mixture	?	Flame emission spectroscopy
5	Sodium hydroxide	?	'squeaky pop' test	Mobile phase	Increased accuracy, sensitivity and speed	Limewater
6	Lithium flame test result	Orange - red flame	Test for chlorine 		?	Chromatography

GCSE Chemistry: 4.8 Chemical analysis revision checklist

Can you…	☹	😐	☺
a) use melting point and boiling point data to distinguish pure from impure substances			
b) identify formulations given appropriate information			
c) explain how paper chromatography separates mixtures			
d) suggest how chromatographic methods can be used for distinguishing pure substances from impure substances			
e) interpret chromatograms and determine R_f values from chromatograms			
f) describe how to test for hydrogen, oxygen, carbon dioxide and chlorine gases			
g) identify metal ions (cations) from the results of flame tests			
h) identify metal ions in solution from the results of adding sodium hydroxide solution and write balanced equations for these reactions to produce the insoluble hydroxides			
i) describe how to test for the carbonate, sulfate and halide negative ions (anions)			

Also important:

Required practical 7: *use of chemical tests to identify the ions in unknown single ionic compounds covering the ions from sections* ***Flame Tests*** *to* ***Sulfates***