

Paint Experiment

Paint is a good example for application of surface chemistry where it consist of many processes such as adsorption, viscosity, dispersion and etc. For this aim, the selection and the ratios of raw materials for paint production comes into prominent in terms of adjusting the quality of the product.

In this laboratory experiment, we will use various reagents which were listed in Table 1. As it can be seen from Tables that each additive has a particular role in paint mixture.

Material		<u>Calgon</u>	Wetting Agent and <u>decreases</u> the surface tension
Water		<u>Taylose</u>	A Viscosity Adjuster
Calgon		<u>Amonniac</u>	pH adjuster
TYLOSE 1000		<u>Foammaster</u>	For removing the foams during paint production
Ammoniac (25 wt. %)		<u>Dispex</u>	A dispersant agent
Foamaster 8034		<u>Orgal</u>	A kind of acrylic binder (Styrene Co- <u>Buytl</u> Acrylate) with high viscosity
Dispex A40		<u>Texanol</u>	Used as conditioner and removes the brush marks
PIGMENTS	1)TiO2	MEG (Mono ethylene glycol)	Freeze Controller
	2)Calcite	Butyl Glycol	Decreasing Agent for Water Evaporation Point
	3) PCC B1	DSX	Viscosity Adjuster
	4) Colemanite		
	Total Pigment		
Opac 204			
PST 50A			
Texanol			
MEG			
Butyl Glycol			
Rocima 623			
Foamaster 8034			
DSX 3256			
Water			
Total			

In addition, production of paint consists of different stages with different parameters such as mixing speed, addition ratio, etc. Of these, the most important one is the addition order where any kind of change for this parameter will definitely effect the characteristics of **paint product which in turn will result in undesired features of paints.**

Experimental study

In this experimental study, a general information about paint production will be given where the stages of paint production will be briefly explained. After presentation of paint raw materials, the first and second stage will be shown consisting of preparation of suitable media for pigment addition, and pigment production by the addition of TiO_2 and $CaCO_3$ into the mixture.

Procedure for preparing experimental report for paint experiment.

- 1) Give brief introduction about paint, paint raw materials and paint production.
- 2) Briefly explain the stages performed in experimental studies.

