

Manufacture of All Kinds of Auto loom Fabrics and Natural Dye Fabrics.

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Carminic acid

Carmine (IPA: / karmaın, -min, -mi i n/), also called Crimson Lake, Cochineal, Natural Red 4, C.I.
75470 or E120, is a pigment of a bright red color obtained from the carminic acid produced by some scale insects, such as the cochineal and the Polish cochineal, and is used as a general term for a particularly deep red color. Carmine is used in the manufacture of artificial flowers, paints, rouge, cosmetics, food additives, and crimson ink.

## Production

Carmine may be prepared from cochineal, by boiling dried insects in water to extract the carminic acid and then treating the clear solution with alum, cream of tartar, stannous chloride, or potassium hydrogen oxalate; the coloring and animal matters present in the liquid are thus precipitated. Other methods are in use; sometimes egg white, fish glue, or gelatine are added before the precipitation.

The quality of carmine is affected by the temperature and the degree of illumination during its preparation, sunlight being requisite for the production of a brilliant hue. It differs also according to the amount of alumina present in it. It is sometimes adulterated with cinnabar, starch and other materials; from these the carmine can be separated by dissolving it in ammonia. Good carmine should crumble readily between the fingers when dry.

Carmine lake is a pigment obtained by adding freshly precipitated alumina to decoction of cochineal.

Carmine can be used as a staining agent in microbiology, as a **Best's carmine** to stain glycogen, **mucicarmine** to stain acidic mucopolysaccharides, and **carmalum** to stain cell nuclei. In these applications, it is applied together with a mordant, usually an Al(III) salt.

## Allergic reactions to carmine

Carmine is used as a food dye in many different products such as juice, ice cream, yogurt, and candies, eyeshadow, lipstick, etc. Although principally a red dye, it is found in many foods that are shades of red, pink, and purple. As a food dye it has been known to cause severe allergic reactions and anaphylactic shock in some people.

Food products containing carmine-based food dye may prove to be a concern for people who are allergic to carmine, or people who choose not consume any or certain animals, such as vegetarians, vegans, and followers of religions with dietary law (e.g. kashrut in Judaism and halaal in Islam).