

Natural Colourants in Cosmetics

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Abstract

Not many people give colour additives used in cosmetics a second thought. When people think of lipstick, they think of red. When they think of mascara, they think of black. And when they think of eyeshadows, they think of blue, brown or pearlescent. But if people were to dig a little deeper, they would find out that *all* colour additives are controlled and regulated by the United States Food and Drug Administration (FDA for short) and fall under the US code of Federal Regulations (CFR), Part 21, Sections 73, 74 and 82.¹ In this work, the terms “colour additive” and “colourant” will be used interchangeably. It will explain what natural colour additives are and where they can be used.

There are also some ingredients that impart colour, but are not considered colour additives by the FDA and cannot be used as such. The FDA likes to use the term “intended use” in many applications. So if ingredients that fall into this category are used in cosmetics, one had better be sure of the intended use of these ingredients. Some examples are the various cholesteric esters (cholesteryl chloride, cholesteryl carbonate, etc.). These are transparent liquids above their melt temperatures but are various iridescent colours in their solid state at room temperature. These are not considered colour additives but impart nice variations in colours when the various esters are blended together. But can they be used in cosmetics? The answer is yes, but not as colourants. They can certainly be used as emollients or moisturizers in an oil phase or in an anhydrous product. But what about all those other ingredients that impart colour but are not listed in the CFR under the category of colour additives?

Introduction

With the continued rise of all-natural, organic and mineral-based cosmetic and personal care products, the need for

natural colourants is also on the rise. But there are only a limited number of colour additives that can be used for this application. In mineral makeup and foundation, marketers claim that they use all natural iron oxides. While this may be acceptable in the EU and Japan, in the United States it is strictly prohibited. The Iron Oxides that can be used as colour additives in cosmetics must be of synthetic origin as per CFR Part 21, Section 73.2250. These regulations are quite explicit in their description of these colourants. We can cite quite a few ingredients that are acceptable for use as colour additives in foreign markets (namely the EU and Japan) but not in the United States. But there are ways of getting around this little problem.

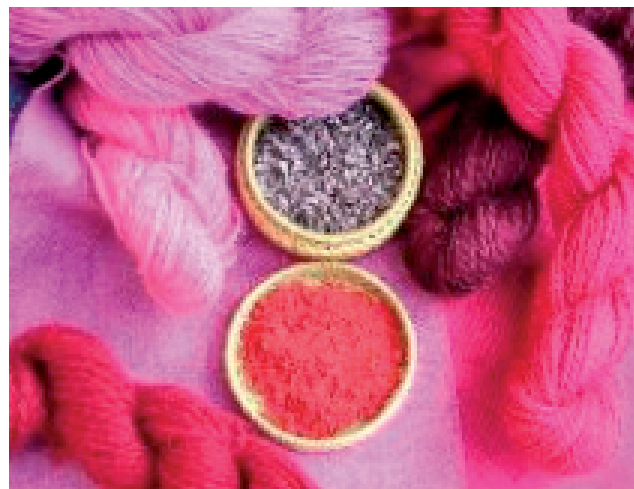


Figure 1 Top: cochineal bugs
Bottom: cochineal extract
Background: cochineal dyed yarns and cloth

First let us examine where the problem lies. Natural colourants fall under the category of colour additives that are exempt from government certification and are covered under CFR Part 21, Section 73. These include inorganic colourants, mineral colourants, vegetable colourants and natural organic colourants. For the most part, they are all natural. Carmine (or