

37350 Annatto Seeds

C.I. Natural Orange 4

german.: annatto

french.: annatto

Charge: 22851

Species: Bixa orellana L.

Product Specification:

Origin:	Morocco
Genetic modification:	no
Disinsectisation by CO2:	yes
Storage temperature:	max. 25°C, store dry and protected from sunlight
Color:	dark red
Odor:	characteristic
Taste:	characteristic

Characteristics:

Source:	culture harvest
Pesticides:	not tested
Heavy metals: lead, cadmium, mercury:	not tested
Microbiology:	not tested
Treated with ionising radiation:	no
Genetic modification:	no

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Annatto are the seeds of the orlean bush *Bixa orellana* (Bixaceae), which is also called orlean tree, ruku tree or urucu tree. This plant is found in the Antilles, tropical South America and almost all other tropical countries. In commerce, the seeds extracted from the seed coats are available as annatto seed. The dye extracted from seeds and shells is on the market dried as powder or even cake.

Both the shell of the seed pods and the shell of the seeds themselves contain the red dye bixin, which belongs to the carotenoids. Bixin is easily soluble in alkaline solutions, which can be exploited in dye extraction: either soak the still uncrushed seeds in alkaline solution and wait until fermentation sets in, and only then crush the seeds. Another possibility is to crush the seeds with water to a pulp. A slightly alkaline solution can also increase the yield of dye. The liquid is then allowed to stand until the dye has settled to the bottom of the vessel, and only then is it filtered. In the early 19th century, an alkaline annatto solution was traded under the name "Scott's Nankeen Dye."

Orlean can be used for dyeing without additional mordant. Shades from orange-red to yellow-orange can be achieved. If metal salts are added to the mordant, the color shades can be deepened. Tin salts produce a beautiful orange on cotton. Silk can be dyed golden yellow with annatto, and after-treatment with tartar gives an orange-red. In any case, soda or caustic soda should be added to the dye bath, as the dye then dissolves better. To fix the dye on the fiber after dyeing, both alum and water slightly acidified with sulfuric acid can be used. In practice, Orlean is mainly used as a primer for over dyeing, e.g. with fuchsin. Textiles dyed with annatto are resistant to acids as well as to soaps and chlorine, but not to light.

A yellow varnish can be precipitated from a sodium hydroxide annatto extract using alum. From a soda extract, an orange-red varnish, known as Orlean varnish, can be precipitated with alum or tin salt.

Other uses of annatto were in food coloring. Butter color, also called anotto, is a mixture of orlean, potash and turmeric. Other food colors made from annatto are called orellin (alcoholic extract), orantia (orlean in soda), and carotene (orlean in oil). Annatto was also used to color the red wax layer of Edam cheese, as well as for margarine, pasta, or custard powder.