

Brief Introduction to the Use of Natural Flavours in Organic Multi-Ingredient Products

1. Introduction

Regulation (EC) 834/07, JAS, and NOP allow the use of **natural, non-organic flavours** in multi-ingredient products. Even though such flavours are normally derived from agricultural products, for some reason, these organic standards **consider them as "non-agricultural"**. American Food Law provides a precise description of what can be considered a "natural flavours": *"...the essential oil, oleoresin, essence or extractive, protein hydrolysate, distillate, or any product of roasting, heating or enzymolysis, which contains the flavoring constituents derived from a spice, fruit or fruit juice, vegetable or vegetable juice, edible yeast, herb, bark, bud, root, leaf of similar plant material, meat, seafood, poultry, eggs, dairy products, or fermentation products thereof, whose significant function in food is flavoring rather than nutritional."* (21 CFR 182).

Special attention must be paid to the **difference between "natural" and "nature-identical"**. Both are legally defined terms. "Nature-identical" refers to substances obtained through chemical synthesis, but chemically identical to naturally occurring substances. **"Nature-identical" flavours are not allowed** in organic products.

2. Provisions in the EU-Regulation and in JAS:

Regulation (EC) 889/08 allows *"natural flavouring substances or ... preparations"* to be used in multi-ingredient organic food (Art. 27(1)(c)). They are not considered to be "agricultural ingredients". For a definition of "natural flavours", the EU-Regulation refers to another Directive (EC) 1334/2008(). According to this Directive, natural flavours are obtained through physical, enzymatic or microbiological processes from material of plant or animal origin.

JAS simply mentions, that flavours must not be "chemically synthesized" (Notification 1606, Table 2).

3. Provisions in NOP:

§205.605 (a)(9) says: *"Flavors, nonsynthetic sources only and must not be produced using synthetic solvents and carrier systems or any artificial preservative."* In addition, § 205.105 (e-g) prohibit the use of so-called "excluded methods" (which refers to genetically modified organisms), ionizing radiation, and sewage sludge.

4. Documentation required for approving natural flavours:

The flavour producer must provide certain documentation, in order to be able to assess compliance of natural flavours with the organic standards. Declarations provided by the organic operator, or by distributors, who are not familiar with the technical specifications of the substance, are not acceptable. Since provisions in the NOP are more detailed than in the other standards, we need more specific information. Here is an overview:

Kind of declaration / information required	Reg. (EC) 834/07	JAS	NOP
Statement, that flavour is "natural", according to legal definitions	x	x	x
Statement, that flavour does not contain GMO	x	x	x
Statement, that flavour has not been produced with the help of GMO (e.g. GM microorganisms in fermenters)	x	x	x
Statement, that ionizing radiation has not been used for the flavour or any part of it	x	x	x
Statement, that sewage sludge has not been used for producing the agricultural ingredients of the flavour			x
Complete Material Safety Data Sheet (MSDS), including detailed information about flavouring substances, solvents, carriers, and preservatives used in the flavour.			x