SUBCRITICAL CO_2-EXTRACTS IN CONFECTIONARY

Specific benefits of applying subcritical CO2-extracts for confectionary products:

- It is tasty.
- Improves product properties, enriching it with biologically active substances, fat-soluble systems of vitamins, natural antioxidants, natural aroma and taste.
- Increases shelf life of the final products as CO2-extracts are bactericidal due to availability of natural antioxidants, natural preservatives, phytoncids, etc.

Subcritical CO2-extracts can be added to a wide variety of products, such as pastries, cream, glaze, soufflé, syrups, stuffings, candies etc.

The normal filling rates are as follows (in % of the total mass of the final product):

CO2-extract of Cinnamon	0.08 – 0.01	CO2-extract of Anise	0.10 – 0.01
CO2-extract of Clove	0.6 – 0.004	CO2-extract of Nutmeg	0.10 – 0.01
CO2-extract of Ginger	0.10 – 0.002	CO2-extract of Cardamom	0.08 – 0.002
CO2-extract of Pimento	0.10 – 0.01	CO2-extract of Orange peels	0.50 – 0.05
CO2-extract of Black pepper	0.05 – 0.01	CO2-extract of Lemon peels	0.50 – 0.01

The filling rates for the above extracts are ranging from 0.5 to 0.02 percent of the total mass of the product.

The Table below shows approximate replacement rates of dry spices with subcritical CO_2-extracts of the same name.

Name of raw materials	Replacement equivalent of 1 kg of dry spices with corresponding CO_2-extract, kg
Cinnamon	0.009
Clove	0.08
Pimento	0.02
Black pepper	0.02
Aniseed	0.05
Nutmeg	0.045
Cardamom	0.03
Ginger	0.0175