METHOD OF DETERMINATION OF ORGANOCHLORINE PESTICIDES IN FRUIT AND VEGETABLE PRODUCTS BY GAS CHROMATOGRAPHY

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Purpose of the work

The amount of organochlorine pesticides (OCPs) is regulated by the Technical Regulations of the Customs Union 021/2011. Concentration of OCPs in fruits and vegetables must not be more than 0.0002 mg/kg. The aim of this work is to develop the conditions for determination of OCPs by gas chromatography.

Objects of research

α-HCH, β-HCH, γ-HCH, DDT, DDD, DDE, Aldrin, Heptaclor

Table 1. The conditions of gas chromatography

Parametrs	Conditions
Gas chromatograph	CHROMATEK CRYSTAL 5000.2
Column	Rxi-5 ms
Volume of injected sample	1 µl
Carrier gas velocity (Hydrogen)	38 cm/s
Oven temperature	160 °C - 10 °C/min to 190 °C - 3 °C/min to 200 °C - 10 °C/min to 240 °C (hold 1 min) - 10 °C/min to 260 °C
Evaporator temperature	250 °C
Detector temperature	280 °C
Spit ratio	1 : 5,3
Analysis time	16 min

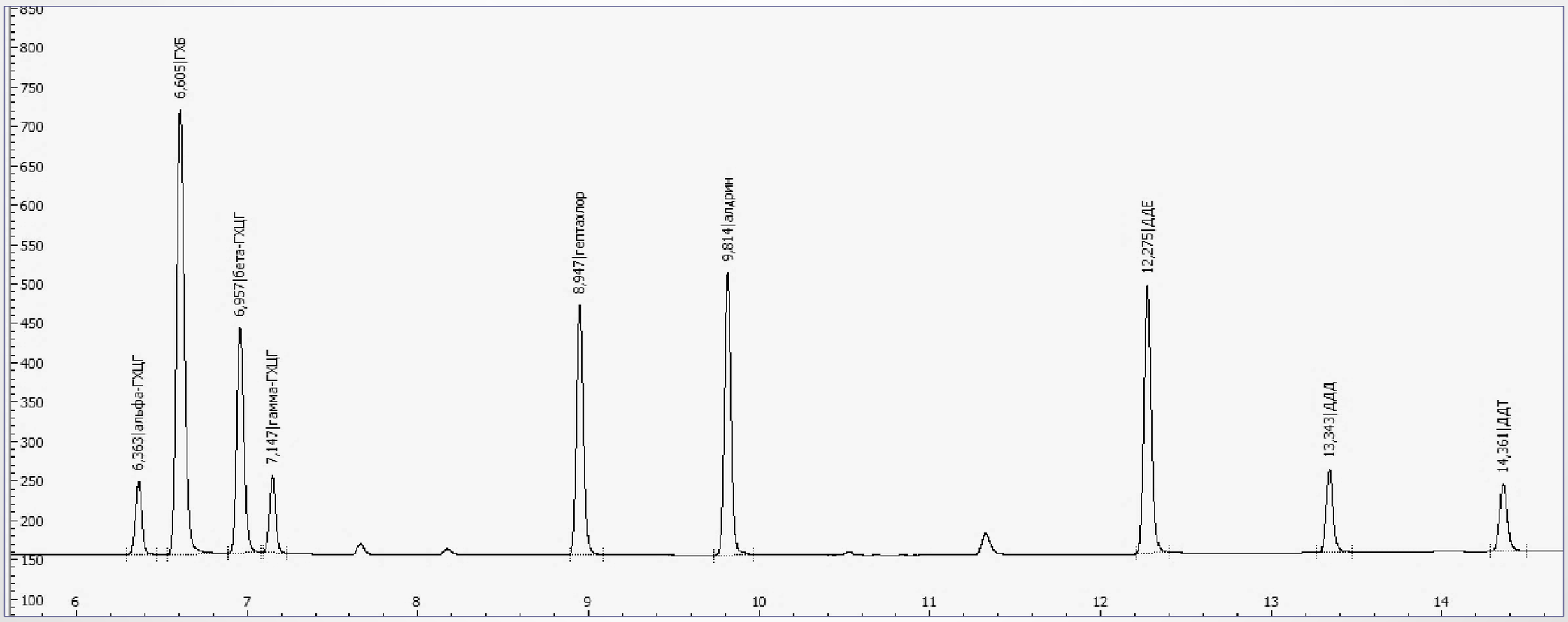

Figure 1. Chromatogram of standard mixture of 9 organochlorine pesticides with concentration of 0.1 mcg/ml