Determination of Inorganic Radioiodides in ^{131}I Labelled Compounds by Means of Instantaneous Thin Layer Chromatography

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Introduction

The main impurity of organic compounds labelled with radioiodine for use in medical diagnosis or therapy is the inorganic radioiodide. According to Argentine rules [17] the amount of inorganic radioiodide must not exceed 5%. The Atomic Energy Commission, several authors pharmacopeias and commercial firms have published on this topic [1–17].

A year ago we have presented a paper dealing this subject [18]. We are now able to extend the list of the compounds which can be analysed by this technique. The method can also be applied to other radioisotopes [19, 20].

Experimental

Instantaneous thin layer plates from Gelman (U. S. A.) were used with silicagel as support over glaswool, 1 N HCl was used as solvent. The developing time was 3 min, by ascendent chromatography at room temperature. For radioiodide R_f was 0.98–1.00.

A list of tested organic compounds with adequate response at this solvent and their R_f are presented.

Labelled compounds	R_f
1 "Biloptin"	0.00
2 "Uromiron"	0.00
3 "Erithrosine B"	0.00
4 "Oleic acid"	0.00
5 "Triolein"	0.00
6 "Tiroxine"	0.00
7 "Triiodothyronine	0.20
8 "Urokon"	0.00
9 "Monoiodothyrosine"	0.00
10 "Diiodothyrosine"	0.00
11 "Cyclohexyl 2 iodine 4, dimethyl 3,5 phenol[(1)]"	0.00
12 "Lipiodol"	0.00
13 "Lecithine"	0.00
14 "Phosphostilbene"	0.00

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