NOTES

2-Methyl-Piperazine-Dithioformate (DTP) Generally Labelled with Tritium

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1,2 g of finely powdered DTP were exposed to 4 C of tritium for 10 days ($p_T = 30$ mm) at room temperature, according the technique of Wenzel [1]. The ampoule was immersed in 100 g of natural uranium.

The labile tritium was then eliminated by boiling twice with ethanol. By this procedure 468 mg of DTP with a specific activity of 63,7 μC/mg were obtained. In a preliminary tritiation test, performed without immersion in uranium, under the same conditions, a specific activity of 31,5 μC/mg were obtained.

Chemical and radiochemical purity of tritiated DTP was confirmed by comparision with an inactive sample.

UV maxima (acqueous solutions) $\lambda_{max}258 : E_1^{1\,\%}_{cm} = 576$; $\lambda_{max}290 : E_1^{1\,\%}_{cm} = 552$. TLC was performed on silica gel, using as eluent sistem ethanol-conc. ammonia (4 : 1); the spots were revealed by spaying with a 5 % $CuSO_4$ solution (brown spot, $R_f = 0{,}63$). The chromatogram examined with the radiochromatoscanner showed only one radioactive peak.

The ethanolic solution contains the main decomposition product, i.e. 2-methyl-piperazine (TLC performed under the same conditions gave an $R_f = 0.33$ and a blue spot). By adding to the ethanolic solution 1 ml of CS_2, 605 mg of DTP with a specific activity of 25,5 μC/mg were obtained.

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REFERENCES

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