

DEVELOPMENT OF THE METHODS OF IDENTIFICATION AND QUANTIFICATION OF 3-METHYLPYRIDINE-2-AMIDE 1-HEXYL-4-HYDROXY-2-OXO-1,2-DIHYDROQUINOLINE-3-CARBOXYLIC ACID

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Introduction: Roughly one-third of the world's population has been infected with *M. tuberculosis*, with new infections occurring in about 1% of the population each year. However, most infections with *M. tuberculosis* do not cause TB disease, and 90–95% of infections remain asymptomatic. In 2012, an estimated 8,6 million chronic cases were active. In 2010, 8.8 million new cases of TB were diagnosed, and 1.20–1.45 million deaths occurred, most of these occurring in developing countries. Of these 1.45 million deaths, about 0,35 million occur in those also infected with HIV. Due to this high record of tuberculosis and its high mortality rate, there is need for the development of new antituberculosis drugs that can improve the life standard of the affected people.

Aim: To develop the methods of identification and quantification of 3-methypyridine-2-amide-1-hexyl-2-oxo-4-hydroxyquinoline-3-carboxylic acid and the procedures required.

Method and materials: For identification of 3-methypyridine-2-amide-1-hexyl-2-oxo-4-hydroxyquinoline-3-carboxylic acid are

- Reaction with FeCl_3 because of the presence of phenolic hydroxyl group
- Reaction with cyanogen bromide, the pharmacopoeial reaction for pyridine cycle.
- Reaction with 2,4-dinitrochlorobenzene, the non-pharmacopoeial reaction for pyridine cycle

The method proposed for the quantification of this new substance, 3-methypyridine-2-amide-1-hexyl-2-oxo-4-hydroxyquinoline-3-carboxylic acid is non aqueous acidimetry.

The titration is carried out with titrant perchloric acid in the medium of acetic acid and the endpoint is determined potentiometrically by a potentiometer.

The results: the results were subjected to quantitative review as the procedure was repeated can therefore makes it possible to conclude that they are reliable, making it possible to assay the substance by the non-aqueous acidimetry method. Also, the identification of the substance was successfully proven.

Conclusion: this substance can be quantified by non-aqueous acidimetry, and can be identified by the proposed reagents with visible products and reactions.