

EVALUATION OF PRODUCTS GENERATED BY THE ENZYMATIC CATALYSIS OF XYLIDINE PONCEAU 2R

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Resumo

The present study was used to evaluate the nature and amount of amines released from dyes in comparison to the remaining amounts of amines after chemical reduction of the enzyme catalyzed azo (-N N-) compounds. Dyes, especially azo dyes, are widely used as dyes in the process of manufacturing paints, textiles, leather and pharmaceuticals. Although the compounds studied are generally not degraded in their entirety by enzymes, the amine degradation and release method has proved to be efficient. This can be justified by the adsorption of the dye molecule on the cell wall or due to the removal of chromophoric groups. It has been pointed out that chemical or enzymatic methods achieve similar results for the amines obtained, that increasing catalyst concentration increases proportionately the generation of amines and inhibits the generation of other products significantly. The present study emphasizes the qualitative and quantitative analysis of products released from xyronidine ponceau 2R by means of enzymatic catalysis in comparison with chemical reduction, made in HPLC and GC, indicating that the results are similar between the two methods studied, both in their conversion As variety and quantity of products obtained.

Keywords: Xylidine. Catalysis. Azo dyes. HPLC. GC.

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