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## ASSESSMENT OF THE ENVIRONMENTAL IMPACT OF SOME NEW ARYLOXYALKYL CARBOXYLIC ACID DERIVATIVES APPLIED AS PLANT PROTECTION COMPOUNDS

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### Abstract

Five new aryloxyalkylcarboxylic acid derivatives (diazoaminoderivatives) are studied for their thermal behavior by applying a coupled TG-FTIR technique over the (30-400 °C) range in correlation with the environmental impact of gaseous species resulting by thermal degradation. These compounds are of a particular practical significance since they show a high biological potential as agrochemicals, such as pesticides (herbicides, acaricides, fungicides, growing stimulators etc.). This is why the paper follows the evaluation of the environmental impact of the gaseous species evolved by thermal degradation of the compounds under study when the processing temperature of the products retaining these compounds is exceeded above the initial degradation temperature. The evaluation of the impact on the environment - air (EIA) gave results corresponding to a real situation of a modified air for which the index of global pollution ( $I_{GP}^*$ ) is estimated.

*Key words:* diazoaminoderivatives, TG-FTIR, thermal degradation, environmental impact, global pollution index

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