

## Accepted Manuscript

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J. Manuel Ledo, Henoc Flores, Julio M. Hernández-Pérez, Fernando Ramos, E. Adriana Camarillo, J.M. Solano-Altamirano

PII: S0021-9614(17)30321-X  
DOI: <http://dx.doi.org/10.1016/j.jct.2017.09.007>  
Reference: YJCHT 5206

To appear in: *J. Chem. Thermodynamics*

Received Date: 10 March 2017  
Revised Date: 24 August 2017  
Accepted Date: 4 September 2017

Please cite this article as: J.M. Ledo, H. Flores, J.M. Hernández-Pérez, F. Ramos, E.A. Camarillo, J.M. Solano-Altamirano, Gas-phase enthalpies of formation of ethyl hydroxybenzoates: an experimental and theoretical approach, *J. Chem. Thermodynamics* (2017), doi: <http://dx.doi.org/10.1016/j.jct.2017.09.007>

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## Gas-phase enthalpies of formation of ethyl hydroxybenzoates: an experimental and theoretical approach

J. Manuel Ledo, Henoc Flores\*, Julio M. Hernández-Pérez, Fernando Ramos, E. Adriana Camarillo, J. M. Solano-Altamirano.

Facultad de Ciencias Químicas de la Benemérita Universidad Autónoma de Puebla 14 sur y Av. San Claudio, C.P. 72570, Puebla, Pue, México.

\*Corresponding author. E-mail: henoc.flores@correo.buap.mx

### Abstract

In this work, we report the molar enthalpies of formation of ethyl 2-, 3-, and 4-hydroxybenzoates in gas-phase at  $T = 298.15$  K, derived from experimental techniques such as static-bomb combustion calorimetry, differential scanning calorimetry, and thermogravimetric analysis. We calculated as well the enthalpies of formation (of the same compound set) in gas-phase through the Gaussian G4 composite method, and a Boltzmann averaging procedure weighted with the Gibbs free energy. Finally, we discuss and compare experimental and theoretical results.

*Keywords:* Energy of Combustion; Enthalpy of Formation; Heat Capacity, Ethyl hydroxybenzoate; G4 Method.

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