



STOLLER ENTERPRISES, INC.

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March 27, 2017

FROM: Stoller Enterprises, Inc.
9090 Katy Freeway Ste. 400
Houston, TX 77024

TO: AAPFCO Terms and Definitions Committee

To Whom It May Concern:

Regarding the definition of our fertilizer chelating agent, ethanol, 2-amino-2-hydroxy-1,2,3-propanetricarboxylate (EAHP), Stoller Enterprises, Inc. requests that the official defined acronym of previously stated compound be changed from 'metal-MEA' to 'metal-EAHP.' Examples of the definitions are as follows:

New AAPFCO Definitions

EAHP (Ethanol, 2-amino- 2-hydroxy- 1,2,3-propanetricarboxylate) – is a chelating agent of metal salts composed of monoethanolamine and citric acid.

Calcium EAHP – is a chelate of any calcium salt and Ethanol, 2-amino- 2-hydroxy- 1,2,3-propanetricarboxylate.

Cobalt EAHP – is a chelate of any cobalt salt and Ethanol, 2-amino- 2-hydroxy- 1,2,3-propanetricarboxylate.

Copper EAHP – is a chelate of any copper salt and Ethanol, 2-amino- 2-hydroxy- 1,2,3-propanetricarboxylate.

Iron EAHP – is a chelate of any iron salt and Ethanol, 2-amino- 2-hydroxy- 1,2,3-propanetricarboxylate.

Magnesium EAHP -- is a chelate of any magnesium salt and Ethanol, 2-amino- 2-hydroxy- 1,2,3-propanetricarboxylate.

Manganese EAHP – is a chelate of any manganese salt and Ethanol, 2-amino- 2-hydroxy- 1,2,3-propanetricarboxylate.



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Zinc EAHP – is a chelate of any zinc salt and Ethanol, 2-amino- 2-hydroxy- 1,2,3-propanetricarboxylate.

We request this change occur because our proprietary chelation technology is misrepresented by the current acronym “MEA.” Monoethanolamine (MEA) is a chemical compound that is used as a pH-adjustment additive in our overall chelation process. When combined with citric acid, it also complexes the metal and forms the chemical compound ethanol, 2-amino-2-hydroxy-1,2,3-propanetricarboxylate. Below is a figure displaying this compound and the reason for the naming of this compound. The ethanol portion of the compound is color coded in blue, the amino is in green, the 2-hydroxy is in red, and the 1,2,3-propanetricarboxylate is in black.

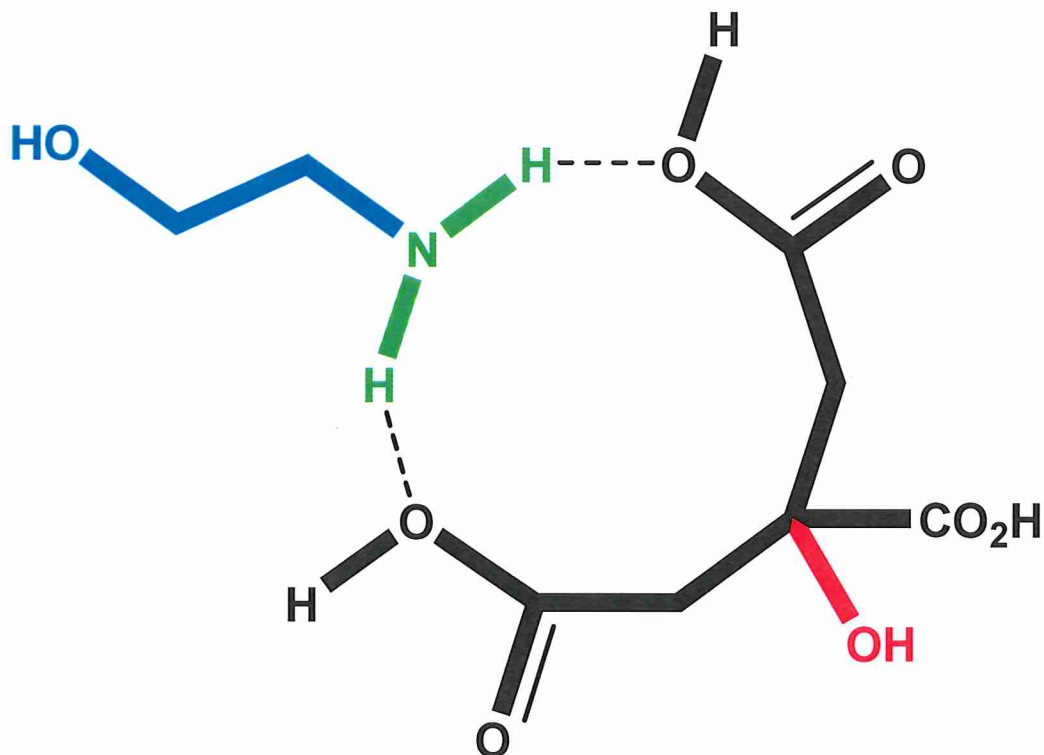


Figure 1: Ethanol, 2-amino-2-hydroxy-1,2,3-propanetricarboxylate



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Methods of Analysis:

Analysis of the liquid fertilizers using Stoller metal chelation technology is performed with two tests: utilizing inductively coupled plasma optical emission spectrometry (ICP-OES, see both attached Stoller internal method SEI-005 and Method 6010B from the EPA) and jar testing (Sandler, H. Pesticide Safety 2012 – How To Do a Jar Test). As described in Patent 5,997,600, Stoller chelation technology allows the liquid micronutrients (based on metal oxides) to form clear, homogeneous solutions (which would not occur without chelation). ICP-OES allows us to test these solutions to ensure the micronutrient content is accurate, proving chelation with EAHP is occurring. Jar testing is further proof of chelation. As also cited in the patent, when performing a jar test, the chelated micronutrients remain in solution. Without chelation, this could not occur.

Conclusions:

Stoller Enterprises respectfully submits a formal request for the change of the 'metal-MEA' acronym to 'metal-EAHP' to accurately represent the chemical contents of our products. Thank you for your time and consideration in the review of our products.

Sincerely,

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