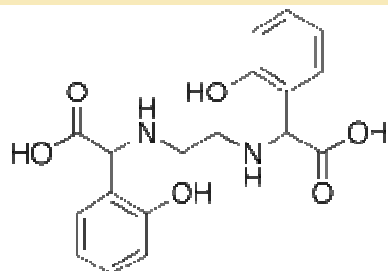


## EDDHA



[IUPAC name\[hide\]](#)

2-[2-[[2-Hydroxy-1-(2-hydroxyphenyl)-2-oxoethyl]amino]ethylamino]-2-(2-hydroxyphenyl)acetic acid

Other names [\[hide\]](#)

Ethylenediamine-*N,N'*-bis(2-hydroxyphenylacetic acid)

### Identifiers

<a href="#">CAS number</a>	<a href="#">1170-02-1</a> ✓
<a href="#">PubChem</a>	<a href="#">14432</a>
<a href="#">ChemSpider</a>	<a href="#">13782</a> ✓
<a href="#">ChEMBL</a>	<a href="#">CHEMBL21178</a> ✓
<a href="#">Jmol-3D images</a>	<a href="#">Image 1</a>
	<a href="#">Image 2</a>

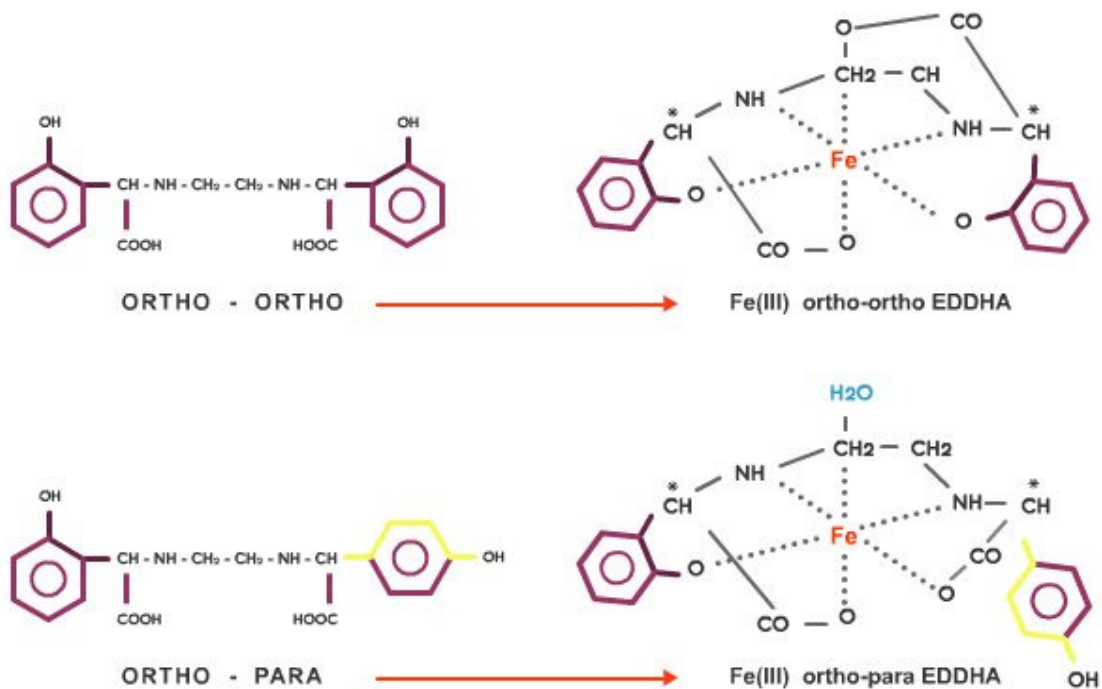
### Properties

<a href="#">Molecular formula</a>	C <sub>18</sub> H <sub>20</sub> N <sub>2</sub> O <sub>6</sub>
<a href="#">Molar mass</a>	360.3612

# WHY ORTHO-ORTHO?

## Importance of Ortho-Ortho

The complex organic molecules such as Iron chelate can present different isomers or structural positions in their structural formulas. The chelate agent EDDHA present two isomers: "para" and "ortho". The Iron presents six valencies. To have a totally protected Fe it should form six connections covering the six valencies. In the isomer "para", the Iron only forms five connections, and therefore it is exposed to any interaction.



In the isomer "ortho", the Iron forms the six possible connections, and therefore Fe is completely protected, avoiding any possible interaction. With these consequences we can conclude that the maximum protection and quality is offered by the isomer "ortho".

## Advantages of Ortho-Ortho EDDHA

In calcareous soils exists a great quantity of Iron and therefore it is not necessary to contribute more Fe in to the soil. But it is necessary to help the plant to be able to absorb it. With the help of the Iron chelate, it is assimilated by the plant and the chelate agent remains in the soil and make the solubilized Fe available for the plant. This is designated as "iron shuttle effect" or "effect transporter" that allows the plant to absorb Fe from the soil.

The main factor of this process is not the existing Fe, but the chelate agent that contains it. And it contributes to increase the absorption of the native Fe in the soil.

Fe EDDHA and products including this chelate should be formulated looking for the optimum combination of ortho-ortho-EDDHA and ortho-para-EDDHA isomers, both well known as chelating agents.

The ortho-para-EDDHA isomer releases iron (Fe) in a way that causes a better shock effect in plants, which are stressed due to a lack of iron. Ortho-para isomer agronomic advantages, concerning quick action and sufficient stability in calcareous soils, have been proved in several tests carried out by prestigious universities like the Autonomous University of Madrid and/or the University of Alicante. Furthermore, the contents of ortho-ortho-EDDHA guarantee the maximum stability and persistence of the product in the soil.