

## **Echium Oil - Valuable Source of Omega-3 and Omega-6 Polyunsaturated Fatty Acids**

Yann Raoul, Elizabeth Lewis, Alun Barnes, Croda Chemicals Europe Ltd  
Hull, UK

The desaturation-elongation pathway for the bioconversion of ALA to EPA and DHA operates in humans but is extremely limited. Less than 10% of ALA entering the pathway is converted to EPA, but in contrast, approximately 40% of stearidonic acid (SDA) is converted to EPA.

As a result, there is a great deal of interest in sources of stearidonic acid-rich oils for applications in the healthcare sector. Echium oil is a plant oil containing around 85% of omega 3, omega 6 and omega 9 fatty acids, including a significant level of SDA.

The presence of SDA in Echium oil therefore represents a vegetarian source of EPA and can be used for both nutritional supplementation by promoting cardiovascular function and topical applications by reducing inflammation in conditions such as eczema.

In December 2006, Croda obtained novel foods approval in the US allowing us to sell Echium oil to the Health Care Market. An equivalent EU application is in progress and approval is imminent.