

# Abstracts

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More than just mild – new innovative concepts for alkyl ether carboxylates in personal care

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Alkyl Ether Carboxylic acids and their salts have been used in Personal Care products for many years due to their extremely good skin and eye mildness, good ecotoxicological properties, and good compatibility with all kinds of surfactants - including cationic type surfactants and specific additives such as cationic polymers in shampoos and bath gels. Alkyl Ether Carboxylic derivatives are produced by Kao Chemicals Europe under the trade name of AKYPO®. The products included in the range differ from each other in the degree of ethoxylation and in the alkyl chain length. For cosmetic applications, vegetable origin fatty alcohols are used, mainly coconut alkyl chain (C<sub>12/14</sub>), because of the high foaming properties required for cleansing products. Investigations on the use and properties of Alkyl Ether Carboxylates in several types of cosmetic products have always been linked to consumer requirements. Nowadays, the market is changing very quickly in order to satisfy consumer needs. Formulations have evolved throughout the past decades from simple cleansing and foaming bases to fairly sophisticated systems containing a variety of surfactants combined with one or more additives, and such products are moreover expected to provide extra benefits such as conditioning, a soft and shiny feel, etc. Alkyl Ether Carboxylates play an important role in providing many of these benefits. In combination

with other raw materials, they improve skin and hair conditioning because of the low interference with cationic surfactants. They can act as rapid foam boosters, and are good solubilizing agents for hydrophobic materials such as silicones - thereby improving hair shine, among many other uses. The aim of the present work was to explore the mechanisms underlying such interesting behaviour of Alkyl Ether Carboxylates. As conclusion new innovative concepts for these compounds were found and described in this article. paper presented during hpci Congress in Warsaw (Poland) in November 2009

Activation of phenolic antioxidants via hydrogen bonding. Hydrogen bond network - an alternative way of looking at cosmetics?

K. Staliński

Antioxidants are compounds which are capable of preventing or slowing the oxidative damage to organic material mostly caused by free reactive radicals. These properties may be, in part, due to their capacity of formation of inter- and intramolecular hydrogen bonds. In this context, factors influencing free radical scavenging properties of derivatives of phenol have been shortly reviewed.

Bisabolol and its activity

A. Ciesielska

Natural medicine in the 21st century raises as many positive feelings as objections. Some praise its efficacy, pointing out to the centuries-old heritage of herbal

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medicine, while others claim that it is ambiguous due to the non-uniform composition of extracts used. In order to reconcile both sides, scientist have focused on substances from natural sources and investigated a number of front-runners of herbal medicine. Chamomile (*Matricaria recutita* (L.) Rauschert, syn.: *Chamomilla recutita* L.) extract is one of them. A lot has been written about the beneficial action of chamomile, and many use it now as well. Suffice it to say, the aromatic oil from the plant has a broad spectrum of action both in medicine and in cosmetics. Like Hippocrates, generations of doctors recommended drinking chamomile infusions for gastritis and various inflammatory conditions, while compresses were said to provide relief to irritated, burnt or damaged skin. However, the fact that chamomile products have been found in nearly every pharmacopeia throughout the world, starting from 1882, and they include preparations, such as chamomile (*Chamomilla recutita* L.) and Roman chamomile (*Chamaemelum nobile* L.) flower extracts and aromatic oils, confirms the true value of the plant [Franke, 2005]. Considering the complete spectrum of oil properties, it is worth examining its composition closer and find what is really responsible for this success.

#### Horse Chestnut Triterpenes

D. Milczarek

The Horse Chestnut (*Aesculus hippocastanum*) is a domesticated tree species of the Hippocastanaceae family. The plant is native to the Balkan Peninsula, being quite widespread in Europe, Asia and North America. There are a lot of decorative varieties with rose and red flowers as well as full-bloom varieties. It is planted in parks, along lanes and streets. The Horse Chestnut has also been used for hundreds of years in folk medicine and cosmetics (Pieroni et al. 2004). The Horse Chestnut has been applied for a long time in Turkey to treat cough in horses, hence its name in English and Russian. Nuts are most commonly used as the raw material, with bark, leaves and flowers also being valuable. Flower tincture has been used for treating gastroenteritis. Bark or flower decoction has been used in gastric complaints. Furthermore, flowers pulverised in water were applied as a washing agent. Chestnut seed mash was employed for compresses in haemorrhoids. There are also a number of superstitions concerning chestnuts. According to one of them, chestnuts carried in a pocket relieve pain. A widespread opinion is that they neutralise electromagnetic radiation. Dowsers think that chestnuts put under a bed or a desk improve mood and reduce adverse effects of so-called water veins. Extracts from plants from the Hippocastanaceae family are also used in modern pharmaceutical and cosmetic products (Sirtori 2001). Horse Chestnut extract is used in the treatment of thrombi, oedema, haemorrhoids, varices, muscle and vein inflammation and peripheral and cerebral circulation

disorders. Twenty-five species in total make up the *Aesculus* genus. Large amounts of pentacyclic triterpene compounds have been found in plants used for thousands of years in natural medicine, whose glycosidic derivatives (saponins) have varied biological activity (Patočka 2003).

#### The New EC Cosmetics Regulation 1223/2009 – Contents and First Explanations

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On 22 December 2009 the European Cosmetics Regulation 1223/2009 was published in the Official Journal of the European Union. After tough negotiations between the European Commission, which had presented the first draft more than two years ago to the Member States and stakeholders, and the EC Council of Ministers and the European Parliament, the Regulation was signed on 30 November 2009 in Brussels by the Presidents of the European Parliament and the Council of Ministers. The new EC Cosmetics Regulation will completely replace the currently valid EC Cosmetics Directive 76/768 and, by extension, most of the national provisions which are set out in the Food and Feed Code (LFGB) and in the Cosmetics Ordinance in Germany. Regulation 1223/2009 will only enter into force on 11 July 2013, with the exception of specific articles which already come into force on 1 December 2010 and 11 January 2013. This means that the European Community will have a harmonised legal regulation at its disposal. All the economic stakeholders and national legislators now have enough time to take the necessary steps or to make statutory amendments to national legislation. At the present time corresponding guidelines or explanations from the Commission are not yet available for many of the envisaged provisions. The main IT structures are nowhere near available in order to meet certain requirements already today (e.g. notification pursuant to the new Regulation). The new Regulation 1223/2009 will render superfluous the provisions regarding cosmetic products to be found in the national German Food and Feed Code (LFGB). The German Cosmetics Ordinance will only be needed in conjunction with the penalties imposed in cases of infringement of Regulation 1223/2009.