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PRESS RELEASE

The first stone is laid. New Bio-on plant to produce bioplastic microbeads for cosmetics

- Construction begins tomorrow on a new plant set to be completed by the end of this year that will start production early in 2018 thanks to a 15 million Euro investment.
- First plant from new Bio-on Plants production unit will produce Minerv Bio Cosmetics, the 100% bioplastic destined to replace the microbeads in cosmetics that pollute the seas and are now prohibited in many countries.
- A sustainable project. Bio-on has converted a former factory in Castel San Pietro Terme near Bologna, meaning no new land is occupied or wasted.

Bologna (Italy), 21 March 2017 – Bio-on, listed on the AIM section of Borsa Italiana, today laid the first stone in its new plant that will produce Minerv Bio Cosmetics, the **microbeads in PHAs special bioplastic designed for the cosmetics sector** and destined to replace the microscopic particles (microbeads) made from oil-based, non-biodegradable plastic now used in many cosmetics products. **Like all Bio-on bioplastics, Minerv Bio Cosmetics is 100% biodegradable.**

The innovative plant, due to be completed by the end of this year and beginning production in 2018 thanks to a 15 million Euro investment, will employ approximately 40 people. The plant will occupy an area of 30,000 m^2, 3,700 of which is covered and 6,000 land for development, and will have a production capacity of 1,000 tons per year expandable to 2,000. It will be equipped with state-of-the-art technologies and the most advanced research laboratories, where Bio-on will test and develop new types of PHAs bioplastic using agricultural and agro-industrial waste as raw material. Bio-on also demonstrates its focus on sustainability in its choice of site, opting to convert a former factory in Castel San Pietro Terme near Bologna, meaning no new land is wasted.

"We are pleased because so far we have obtained the necessary authorisations to begin construction on schedule," explains **Marco Astorri, Bio-on Chairman and CEO.** "We expect to keep to that set down in our Industrial Plan which takes us through to 2020. We are also extremely proud," adds Astorri, "because thanks to our technology the cosmetics sector can now take a 'green' turn that millions of consumers around the world have been demanding for some time."

Entering the innovative sector of high-margin special bioplastics production, through this new Bio-on Plants production site, adds to the company's existing production licensing on which it has developed since its foundation in 2007.

All the **PHAs bioplastics (polyhydroxyalkanoates)** developed by **Bio-on** are made from renewable plant sources with no competition with food supply chains. They guarantee the same thermo-mechanical properties as conventional plastics with the advantage of being 100% eco-sustainable and naturally biodegradable at ambient temperature.

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Bio Cosmetics: Bio-on bioplastic designed for cosmetics that defend the environment. Everything you need to know

Few are aware that many **cosmetics pollute the rivers and seas** due to the presence of microscopic particles of oil-based and non-biodegradable plastic (polyethylene, polypropylene and other types of polymers). To solve this problem and make every beauty product "environmentally friendly", **Bio-on** developed and patented a revolutionary, innovative solution in 2016 based on the bioplastic Minerv PHAs, which is made from renewable and 100% biodegradable plant sources. The new formulation, called **Minerv Bio Cosmetics** (type C1), is designed to make microbeads suitable for the cosmetics industry.

The plastic micro particles (known as microbeads) currently used as thickeners or stabilisers in such widely used products as lipstick, lip gloss, mascara, eye-liner, nail polish, creams, shampoo, foam bath and even toothpaste pollute the environment because once they are rinsed off after use, they become a permanent part of the natural cycle: plankton in the rivers and seas swallow these microscopic plastic particles and thus introduce them into the food chain. **The level of pollution is so serious that the USA government has decided to bring in a law** (*Microbead-Free Waters Act of 2015*) **banning the use of oil-based polymers in body care products**. This decision was recently followed by other countries. The theme is also the subject of many awareness campaigns around the world and is one of the focuses of Clean Seas recently launched by the United Nations (http://cleanseas.org/).

Institutions and consumers alike are increasingly aware of the issue but often limit their concern to "scrub beads", which though small fall within the "visible range". The greater danger arises from what cannot be seen, i.e. **texturizing powder**. These micro powders invisible to the naked eye (10 microns) are made from oil-based plastic (methacrylates and polyamides) and are inserted into almost all formulations to change the sensory characteristics of the product.

The new cosmetic grades of bioplastic developed by Bio-on contain **highly spherical** micro powders with a diameter between 5 and 20 microns, with a **porous or hollow structure** to guarantee high absorption of oil and sebum. The special characteristics of these powders are further enriched by exceptional optical qualities such as a **soft focus effect,** which reduces the effect of wrinkles, making the skin brighter and less greasy.

The use in cosmetics products of **Minerv Bio Cosmetics bioplastic eliminates all pollutants** because the micro particles of bioplastic are naturally biodegradable in water and, therefore, do not enter the food chain. What is more, the biopolymer developed at the **Bio-on** laboratories actually decomposes into a nutrient for some micro-organisms and plants present in nature. The benefit for the environment is therefore two-fold.

"Our biopolymer is surprisingly versatile," explains **Paolo Saettone**, **head of Bio-on's cosmetics department**, "and performs at the very peak of its category, without taking into account its unparalleled biodegradability and non-toxicity, which truly sets it apart."

"From now on, cosmetics companies will have the chance to safeguard the environment and make their products 100% ecological," explains **Marco Astorri, Chairman and CEO of Bio-on S.p.A., "**while retaining their performance and effectiveness. Here too, Bio-on bioplastic demonstrates that it can replace conventional oil-based plastic in terms of performance, thermo-mechanical properties and versatility."

For further information:

Video
https://www.youtube.com/watch?v=uAiIGd_JqZc
https://www.youtube.com/watch?v=mGzIz9Ld-sE
https://www.youtube.com/watch?v=pfq000AF1i8

USA
http://www.fda.gov/Cosmetics/GuidanceRegulation/LawsRegulations/ucm2005209.htm
https://www.congress.gov/bill/114th-congress/house-bill/1321/text

EU
http://eur-lex.europa.eu/legal-content/IT/TXT/?uri=URISERV%3Aco0013
http://ec.europa.eu/growth/sectors/cosmetics/legislation/index_en.htm

Bio-on S.p.A.

Bio-On S.p.A., an Italian Intellectual Property Company (IPC), operates in the bioplastic sector conducting applied research and development of modern bio-fermentation technologies in the field of eco-sustainable and completely naturally biodegradable materials. In particular, Bio-On develops industrial applications through the creation of product characterisations, components and plastic items. Since February 2015, Bio-On S.p.A. has also been operating in the development of natural and sustainable chemicals for the future. Bio-On has developed an exclusive process for the production of a family of polymers called PHAs (polyhydroxyalkanoates) from agricultural waste (including molasses and sugar cane and sugar beet syrups). The bioplastic produced in this way is able to replace the main families of traditional plastics in terms of performance, thermo-mechanical properties and versatility. Bio-On PHAs is a bioplastic that can be classified as 100% natural and completely biodegradable: this has been certified by Vincotte and by USDA (United States Department of Agriculture). The Issuer's strategy envisages the marketing of licenses for PHAs production and related ancillary services, the development of R&D (also through new collaborations with universities, research centres and industrial partners), as well as the realisation of industrial plants designed by Bio-On.

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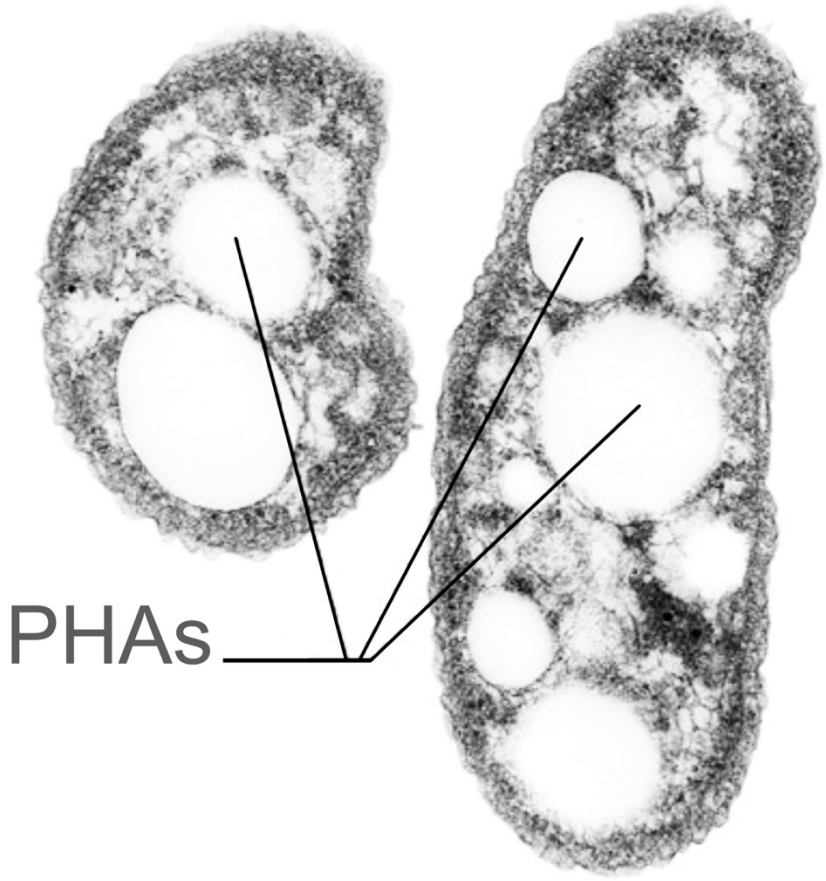
Picture 01: Project

Picture 02: Rendering BIO-ON

Picture 03: Micro powder PHAs for cosmetic implementation BIO-ON



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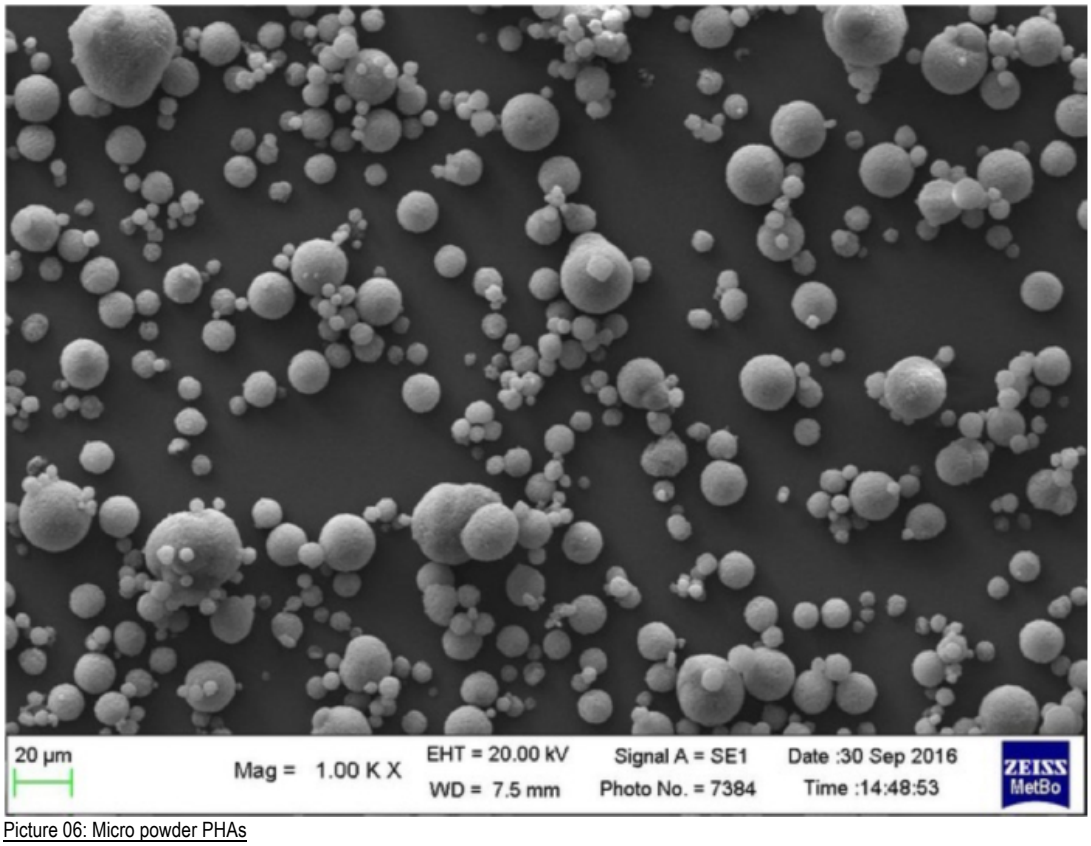
Picture 04: Natural Bacteria with bio polimers PHAs

Picture 05: Micro powder bio polimer PHAs for cosmetics use



Picture 06: Micro powder PHAs

Picture 07: Single micro granule PHAs