

July 8, 2019

DIC Corporation

DIC Announces Plans to Develop Naturally Derived Aspartic Acid and a Biodegradable Aspartic Acid–Based Waterborne Superabsorbent Polymer
—Joint R&D initiative with GEI will target commercial production, a global first—

Tokyo, Japan—DIC Corporation announced today that it has embarked on a joint research initiative with biotech startup Green Earth Institute Co., Ltd. (GEI), aimed at developing naturally derived aspartic acid and a biodegradable aspartic acid–based waterborne superabsorbent polymer (SAP).

In the new initiative, GEI—which boasts outstanding expertise in the development of green chemicals—is charged with developing naturally derived aspartic acid using an innovative fermentation technology that absorbs CO₂, as well as with verifying suitability for mass production. DIC’s role will be to create a process for polymerizing the new aspartic acid and to explore ways to scale-up the production system.

Aspartic acid, an amino acid, is used in such diverse areas as food, cosmetics and pharmaceuticals. Industrially, aspartic acid is synthesized using petroleum-based fumaric acid and ammonia, but demand for natural alternatives is rising in these areas. Having clarified prospects for viable production from a technological perspective, DIC and GEI will begin looking at various commercial production options. Principal applications for SAPs include cosmetics and soil modifiers. However, because conventional SAPs are petroleum-derived and thus not biodegradable, they are a major cause of plastic waste, a pressing global environmental concern. Because the SAP under development by the two companies is made with a recyclable material and is biodegradable, it will contribute to both decarbonization and the reduction of plastic waste.

Guided by its new medium-term management plan, DIC111, DIC is working to provide both social value, which contributes to sustainability and markets, and economic value, which underpins corporate growth, ensuring it remains a unique global company that is trusted by society. Looking ahead, the DIC Group will continue striving to help realize a sustainable society by providing products made with recyclable and naturally derived materials.



Super absorbent Polymer (SAP)

Press Release



Partner:

Green Earth Institute Co., Ltd. (GEI)

<http://www.gei.co.jp/en/>

Related press release:

DIC Completes Investment in Japanese Biotech Startup (September 3, 2018)

http://www.dic-global.com/en/release/2018/20180903_01.html

—Ends—