

July 8<sup>th</sup>, 2019

Green Earth Institute Co., Ltd

Green Earth Institute Co., Ltd.(GEI) in Japan announces that joint research initiative launched with DIC Corporation(DIC) in Japan who focuses on achieving a sustainable society, developing naturally derived aspartic acid with a feature of biodegradable superabsorbent polymer(SAP).

In order to solve global environmental issues, we have been discussing joint development, replacing petrochemicals to biochemicals, as an aim of innovational change.

As a joint development project, GEI will be responsible for producing and developing naturally derived aspartic acid that should be a source for SAPs by using innovative new fermentation technology to absorb CO<sub>2</sub> and DIC will be responsible for studying optimization of polymerizing the new aspartic acid and productivity analysis.

Principal application for SAPs is paper disposable diapers, however, because conventional SAPs are petroleum-derived and nor biodegradable, they are a major cause of plastic waste, a pressing global environmental concern.

We believe we will contribute to decarbonization and reduction of microplastic waste as well, by our SAP development which is made with not only a recyclable material and also have biodegradable feature.