



Mitsubishi Gas Chemical Company, Inc.

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## **Coenzyme Pyrroloquinoline Quinone Categorized as a Non-Drug in the Food and Drug Classification of Japan**

The Ministry of Health, Labour and Welfare (MHLW) issued an official notice on July 10, 2013, classifying pyrroloquinoline quinone disodium salt (common name: coenzyme pyrroloquinoline quinone, PQQ in short) as a non-drug. With this, Mitsubishi Gas Chemical Company, Inc. (MGC; Head Office: Chiyoda-ku, Tokyo; President: Toshikiyo Kurai) advances to expand the PQQ market.

Until now, MGC has been making enquiries to MHLW regarding the food and drug classification, with the aim to market PQQ products in Japan. As a result, with the Pharmaceutical and Food Safety Bureau Director-General Notice dated July 10, 2013 (PFSB Notice 0710-2, Partial Revision of the Standards on the Scope of Pharmaceuticals), pyrroloquinoline quinone disodium salt was added to the "List of Ingredients Determined as Non-drug if Not Described with Pharmaceutical Efficacy (Non-Drug List)."

MGC recognizes PQQ's potential from an early stage, and had since conducted research and development on its production and applications using the company's original fermentation method. The company has already applied for patents on PQQ production methods, formulation, and applications in Japan and overseas. A substance patent on a PQQ crystal form has recently been registered in Japan (Patent 5240362, Pyrroloquinoline Quinone Disodium Salt Crystal).

In the USA, distributions are made under the BioPQQ<sup>®</sup> brand name since 2008, to serve as a completely new health ingredient being used in health food products that claims to improve brain functionality.

Going forward, MGC will develop safe and high-quality PQQ products as a new pillar of its life science businesses.

<Inquiries>

Corporate Communications Division Tel: +81-(0)3-3283-5041

## <Reference information>

### Coenzyme

A substance that assists the activity of an enzyme

### PQQ

A water-soluble quinone compound identified as one of the coenzyme for oxidoreductase in 1979. Besides being found in parsley, green pepper and other vegetables, green tea, and fermented foods, it also occurs in the human body, and is richly present particularly in breast milk. In April 2003 RIKEN reported the possibility of PQQ being a 14th vitamin.

### Benefits of PQQ

Studies conducted jointly by MGC and universities in Japan and overseas have shown that PQQ has benefits such as neuroprotection, nerve growth factor enhancement, antioxidation, and mitochondrial biogenesis. Studies conducted in humans and animals, have established improved brain functions such as enhanced memory and cognitive capabilities, raising expectations for PQQ as an ingredient answering to aging society demands.

At the Engredea exposition held in the USA in March 2013, MGC presentation won the “Ingredient with the Best Science” award for its rich scientific data on PQQ.

### BioPQQ®

BioPQQ is a registered trademark for the PQQ distributed by MGC in the USA. In 2008, it was filed successfully as a new dietary ingredient to the FDA (Food and Drug Administration in the USA). Furthermore, presently MGC is the only company that has submitted such filings to FDA on PQQ.