

The BRC–Microalgal Collection: Diversity of microalgae strains

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The microalgal culture collection was established in 2002 by reorganizing the Biological Resource Center (BRC) that was founded in 1985 as a national center affiliated with the Korea Research Institute of Bioscience and Biotechnology (KRIBB) in Korea. It had a starting point as a collection of microalgae which cause/remediate environmental problems. During the last 8 years, the BRC–Microalgal Collection has collected 649 strains in total (including unopened strains). These strains were isolated up to now from Korean freshwaters and being maintained. Nowadays, the algal culture collection of BRC contains taxonomically 3 classes: Bacillariophyceae (45 strains), Chlorophyceae (310 strains), and Cyanophyceae (240 strains). The purposes of these algal collections were to keep the *ex situ* conservation and to conduct research in the fields of industry, environment, agriculture, fishery, cosmetics and general medicine value. In order to secure uni-algal cultures, the streaking method and an improved capillary pipetting method, which was developed in our laboratory, were mainly used. For axenic (bacteria-free) culture, the lysozyme and antibiotics treatment method was used. In our laboratory, *Spirulina* sp. has been cultivated to be feed supplements or has had some unsaturated fatty acid, such as *r*-linolenic acid, extracted. Recently, a set of oligonucleotide primers for the specific amplification of an intergenic spacer between *cpcB* and *cpcA* and its flanking regions (*cpcBA*-IGS) in the phycocyanin operon from cyanobacteria was developed. Therefore, it seems that this culture-independent method could be applied to identify cyanobacterial strains and to determine the cyanobacterial community structure.