Wheat Grass Juice Stability Tests

<u>Objective</u>: To determine the refrigerated, non-pasteurized shelf life of wheat grass juice, obtained from wheat grass fed solely **OceanGrown**TM **Solution**.

Dates Tests Conducted: October 3rd thru 25th, 2002

Laboratory:

P.E.I. Food Technology Centre

P.O. Box 2000, Charlottetown, Prince Edward Island, Canada, C1A 7N8

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Methods: Samples were taken daily and sampled for microbial analysis using the appropriate standard methods. Analysis was terminated once a microbial guideline was exceeded. Samples were analyzed for: Total Aerobic Plate Count (TAPC), Yeast and Mold, Total Sporeformers and Total Coliform/*E. coli* count. The presence of *Listeria monocytogenes*, *E. coli* 0157:H7 and *Salmonella* specie was determined upon initial opening of each jar of samples. The standard difference between the two treatments was computed for TAPC, Yeast and Mold, and Total Coliforms.

Results: The microbial guidelines, which were taken from the "Health Protection Branch of Health and Welfare Canada Standards and Guidelines for Microbial Safety of Food – Interpretive Summary – Vol. 3" and similar to those of the USDA, were adapted based on the similarity to other products such as fresh cut vegetables. The guidelines were used to determine the wholesomeness, and therefore the shelf stability, of the samples upon storage at 4°C. *E. coli* was not detected nor were any other pathogens evident in any of the samples tested.

"It can be concluded from the results that the wheatgrass samples were microbiologically stable up to the 12th day of storage at 4°C based on the level of Yeast and Mold, plus the 2 days in transit, for a total of 14 days. There was not much difference between the initial pH (6.0-6.5) and the final pH (5.9) to impact any microbial succession patterns in the product in storage. Based on the Yeast and Mold results, the wheatgrass samples are microbiologically shelf stable for 14 days upon storage at 4°C." *Prince Edward Island Food Technology Centre*

Conclusions: This study indicates that wheat grass grown with OceanGrownTM Solution has a shelf life up to 14 days – compared to what most fresh organic juice providers consider the shelf life of their refrigerated wheatgrass juice to be 2-3 days, maximum.

