

Comments on the references provided by CBC via Herbal Magic in support of claims made on supplementary material for Chromagic

It is noted that the product has obtained a Natural Health Product License. The licensed product has a recommended purpose of “support for healthy glucose metabolism and helps the body to metabolize fats and proteins.” This recommended use is consistent with Health Canada's monograph for the ingredient Chromium. The supplementary material provided for Chromagic makes claims far beyond those approved by Health Canada by stating Chromagic provides optimal weight loss and health benefits, including: enhanced insulin function, regulated blood sugar, controlled appetite and sugar cravings and sustained muscle mass. The literature references provided by Herbal Magic in support of their claims constitute three randomized placebo-controlled human trials; one on chromium picolinate with biotin and 2 on chromium picolinate alone.

The 2008 randomized, double-blind, placebo-controlled study by Alberracin et. al. concluded that a combination of chromium picolinate/biotin, when administered as adjuvant to prescription anti-diabetic medication to patients with poorly controlled type II diabetes, can improve glycemic control in overweight to obese individuals with type II diabetes. The trial results are specific to a narrow population of patients with poorly controlled type II diabetes. With respect to translating these results to non-diabetic populations it should be noted that a systematic review of randomized controlled trials was published in *Diabetes Care* in 2007 by Balk et. al. that concluded, "No significant effect of chromium on lipid or glucose metabolism was found in people without diabetes". Furthermore in the *American Journal of Clinical Nutrition* a meta-analysis was published in 2002 by Althuis et al. that found, "Data from RCTs show no effect of chromium on glucose or insulin concentrations in nondiabetic subjects."

The other two references provided by Herbal Magic were studies by Kaats et. al. conducted in 1996 and 1998. In the 1998 study the authors, "sought to answer three methodological issues raised by reviewers" concerning the 1996 study. These issues included a relatively high drop out rate in the first study which could have biased results and questions on the method used to measure body composition. By addressing these methodological concerns in the 1998 study design, the authors concluded that supplementation with chromium picolinate each day can lead to significant improvements in body composition. It must be noted that the authors are referring to statistical significance not significance in terms of improved body composition. The observed changes over the 90 day period in scale weight, body fat and fat mass were actually relatively small, yet statistically significant.

Based on the references provided and the totality of evidence currently available, in my expert opinion the claims in the supplementary material stating Chromagic provides optimal weight loss and health benefits, including: enhanced insulin function, regulated blood sugar, controlled appetite and sugar cravings and sustained muscle mass, cannot be substantiated at this time nor are these claims consistent with the claims approved by Health Canada.