Short Communication

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ROLE OF MINOR MINERALS ON HUMAN HEALTH DIABETIC CONTROL WITH CHROMIUM CONTAINING HERBS

Part IV. Chromium Contents of the Herbs Used for Diabetic Control in Islamic System of Medicine

Chromium-diabetes, Carbohydrates

K. M. Janjua

P.C.S.I.R. Laboratories, Lahore

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Chromium is now considered part of a compound called glucose tolerance factor, a substance known to be present in brewer's yeast, liver and kidney which improves glucose tolerance in animals suffering from insulin disorder. The analysis of hair of a diabetic patient showed that the level of chromium was less than normal in the body [1, 2]. It was suggested that deficiency of chromium resulted in hyperglycemia, growth failure, Neuropathy, Cataract and Atherosclerorisis [6]. Chromium supplementation [7, 8] has been reported to improve glucose tolerance in mal-nourished children and elderly diabetic subjects. Administration [9, 10, 11] of organic chromium compound and some herbs were found to be of benefit and appeared to be advisable during diabetes.

Curcuma longs (Turmeric) *Acasia arabica* (Bark of Kikar) *Vinca rosea* (Gul-i-Sada Bahar Flower) *Coridamyxa* (Lassori, Fruit) *Musa paradisiaca* (Banana, Fruit) *Phyllanthus embilica* (Amlah, Fruit) were precured from the market, these were first washed, dried and then their ashed were made at 1200°C by heating 16 hours in furnace.

The solutions for atomic absorption were prepared by Volkovic method [12]. Measurements of absorptions were carried out in ketone phase by using Perkin-Elmer 280-B atomic absorption spectrophotometer with lamps having different wave length.

	Source	Ash Colour	*Average micrograms per gram* Cr	Zn	Cu
1.	*Curcuma longa* (Turmeric)	Violet	6.25±0.2	24.0±6	7.47±0.2
2.	*Acasis arabica* (Kikar)	White	1.25±0.03	2.43±0.2	14±2
3.	*Vinca rosia* (Gul-i-Sada-Bahar)	Light Brown	1.00±0.01	4.01±0.3	4.00±0.18
4.	*Cordia myxa* (Lassori)	Bluish green	2.00±0.02	11.43±0.4	16.00±1.34
5.	*Musa paradisiaca* (Banana)	Blue	2.81±0.2	3.00±.12	9.11±0.98
6.	*Phyllanthus emblica* (Amlah)	Bluish green	2.50±0.32	4.00±0.2	3.00±0.28

Scientific literature fully supports [7, 11, 12] that the chromium deficiency in the human body first disturbs the carbohydrate metabolism and then leads to the diabetic condition. Naturally chromium is present, especially with all sweet things in a sufficient quantity, so that carbohydrate metabolism is kept in order and body functioning properly. (Raw sugar contain 0.24 ppm Honey 0.29 ppm). White sugar contains negligible amount of chromium which is the real cause of the chromium deficiency inside the human body.

The chromium requirement of the body can be fulfilled by giving organic or inorganic salts ($CrCl_3$, Cro_3). The chromium absorption of the body depends on the nature of the salts. Organic chromium salts are preferred [10] due to their being more acceptable to the body.

Analysis of the herbs, which have been utilized for diabetic control in Islamic System of medicine, showed the presence of large amount of chromium (1.0 to 6.5 ppm) as compared with carbohydrates. So the amount of chromium in herbs is of therapeutic value in its natural form. The chromium present in herbs may be one of the major factor to improve glucose tolerance in mal-nourished children and elderly diabetic subjects. Administration [9, 10, 11] of organic chromium compound and some herbs were found to be of benefit and appeared to be advisable during diabetes.

Key words : Diabetic control with herbs, Carbohydrates, Chromium.

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