



CBC (EUROPE) Ltd.
Chemical Division

RIF.: CBC IT

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TOUCHI EXTRACT

DATA SHEET

Diabetes, TG, FOSHU status Touchi Extract [TE]



- **Touchi Extract** derived from "**Touchi**", fermented soybean, which has been a Chinese traditional medicine and food for a several centuries and developed in cooperation with Hokkaido University.
- **FOSHU status in JAPAN**. Patented in Japan, USA, China and Europe.
- **TE has a property to inhibit the activity of α -glucosidase and inhibits the rise of blood sugar level after meal. In this mechanism, there is decrease action of serum triglyceride because it improves insulin resistance.**
- **Daily intake is TE : 0.3 g/meal (0.9 g/day), effectively lowered FBG and HbA1c in many clinical tests. The effect appeared in the examinee of 77.8%. No side effect. Neither abdominal disorder nor other side effect.**
- **Safety: No mutagenicity : Ame's test
No acute toxicity: LD50 over 5,000 mg.**
- **Much of PMS data is showed effectiveness and safety of TE.**



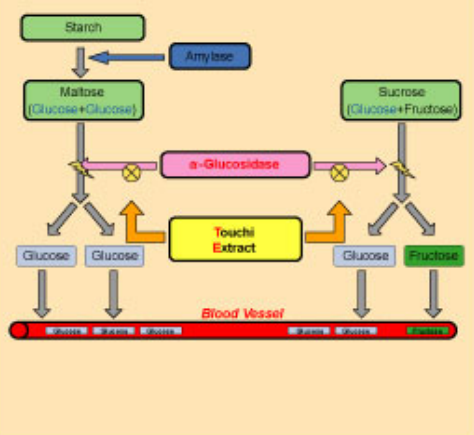
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TOUCHI EXTRACT

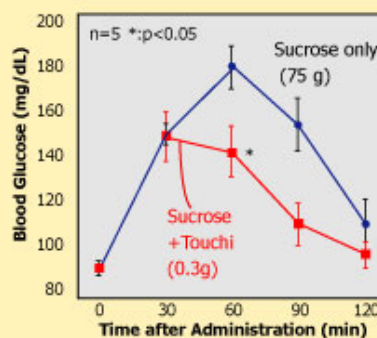
DATA SHEET

Anti-Diabetic Mechanism of TE as Alpha-Glucosidase Inhibitor



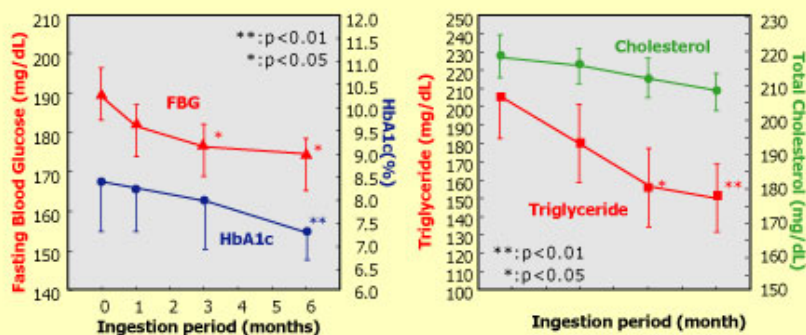
Single Oral Ingestion Test of T.E [Sucrose Tolerance Test]

Method: 8 borderline type-2 diabetic subjects (FBG < 110 mg/dL). After 12 hr fast, subjects were orally loaded with sucrose (75 g) with or without TE.



TE Clinical Study [Open trial]

Method: 23 borderline & low grade diabetes. 0.3g-TE/meal (0.9g-TE/day) . 6 months administration.



FBG, HbA1c and Triglyceride levels significantly decreased. Total Cholesterol levels substantially decreased.

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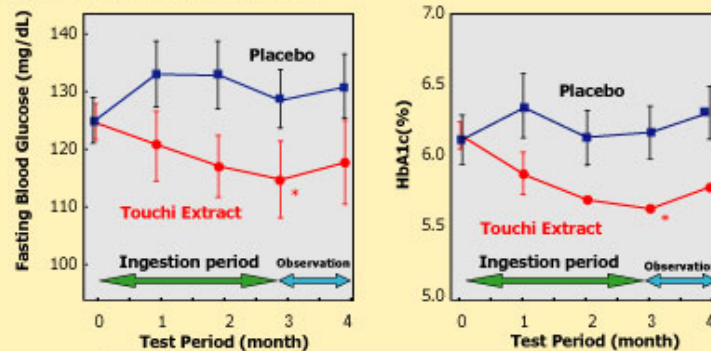


TOUCHI EXTRACT

DATA SHEET

TE Clinical Study [Double-blinded]

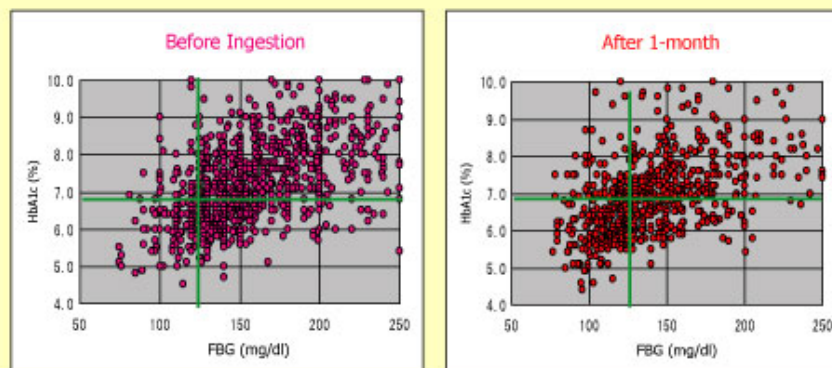
Method: 36 borderline and mild type-2 diabetic subjects (FBG > 100 mg/dL, HbA_{1c} > 5.0%).
After 2 weeks observation period, assigned to two groups to receive either TE (0.3 g/meal, 0.9g/day) or without TE supplement for 3 months.



FBG and HbA_{1c} levels significantly decreased.
Strong inhibitory activity against α -Glucosidase

The Change of Consumers FBG and HbA_{1c} for 1 month (About 3,000 questionnaires)

As you can see from this graph, you can obviously observe that the core of the profile reaches the normal level of FBG and HbA_{1c}.



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AVAILABLE DATA

1. Product information

- a. Product data sheet
- b. Product specification (Certificate of Analysis)
- c. Determination of alpha-glucosidase Inhibitory Activity (Jul.14,2001)
- d. Enzyme inhibitory Activity of Touchi Extract
- e. US Patent 6,299,911 B1
- f. EU Patent 1,025,851 A1
- g. DE Patent 69903911.8

2. Safety & Efficacy

- a. List of safety data (Jan. 21,2003)
- b. Japan Food Research Labs (Ref.: 299090340-004)
- c. Pharma Screen Data Report
- d. Japan Food Research Labs (Ref.: 299090340-005)
- e. Internal document "Safety test of Touchi extract after Borus administration in Healthy Subjects - Jun. 15,1999
- f. Internal document "Safety test of Touchi extract after Borus administration in Healthy Subjects - Jun. 15,1999
- g. Internal document "Post marketing survey (as of June, 2003)
- h. J. Nutr. 131: 1211-1213, 2001
- i. Life Science 70 (2001) 219-227
- j. Journal of Nutritional Biochemistry 12 (2001) 351-356
- k. J. Nutr. 131: 2105-2108, 2001
- l. Nutrition Research 23 (2003) 713-722

3. Stability

- a. Touchi Extract Bulk Powder
- b. Touchi Extract Tablet
- c. Touchi Extract Tea

4. Formulation

- a. Touchi Extract Tablet
- b. Touchi Extract Tea

5. Product Label

- a. Touchi Extract Tablet
- b. Touchi Extract Tea