PRODUCTION OF SHRIKHAND FROM SOYMILK AND CHEMICAL ANALYSIS OF THEIR PRODUCT

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Abstract
Soymilk is most popular non-dairy milk alternative made from nutritionally dense Soybean. Soyshrikhand is an inexpensive remarkable versatile high protein food from soybean. Soyshrikhand contains higher amount of protein and low amount of fat as comparative buffalo milk shrikhand. In presence study was carry out in an attempt to preparation of soymilk and formation of their product using the process such as coagulation, desiccation & fermentation. Comparative clarify the lipid contain were determine in soyshrikhand and market buffalo milk shrikhand by acid value test result shows the soyshrikhand shows concentration of fat i.e. 7.3 mg/ml & buffalo milk shrikhand i.e. 12mg/ml shows. It was concluded that in soyshrikhand low concentration of fat is present it significant to health conscious person and use for those person who have fat problem, diabetes patients, heart disease & certain cancers. High quality of soyshrikhand is applicable for all section of people suffering from lactose intolerance. It is an excellent food for baby/ youth /old/pregnant women. Although what we choose to drink is really a matter of personal preference and our health objectives but looking at the comparison soymilk look healthier choice.

Keywords- Soymilk, soyshrikhand, market shrikhand, Fatty acid test.

Introduction
The soybean (Glycine max) is plant belonging to the family leguminosae and sub family papilionaceae. Several legume based milk and milk products have been developed in attempts to extend the supply of milk like product especially in area where milk is in short supply since legumes are important sources of relatively in expensive protein, introduction of imitation milk product from legumes may contribute to the alleviation of protein malnutrition (Caygill et al, 1981). Milk is an excellent source of most essential mineral for human it contains mostly calcium, phosphorous & constitutes the most important source of bio available calcium in our diet (ICAR, 1981). The use of soymilk product in the feed & food industry has increased steadily the world soybean. Production in correctly 219.8 million matrix ton out of which India produced 9.3 million matrixes. Ton constituting about 4% of the total world production out of this less than 10% is directly use for Human consumption (Gandhi 2006). Soybean is an important source of high quality protein for vegetarians & non-vegetarian alike worldwide (Burke 1996) according to anochili (1984) soymilk as animal milk substitute has been gaining Popularity in the dairy industry and also widely consumed(Bahareh H.et.al 2009).

One of the most important aspects of dairy production is the modeling of the milk yield & quality (Beev et.al.1991, Kamidi, 2005, Morant&Gnanasakthy1989, Mostert et. al.2003). The quality of milk is better explained by the fat & protein concentration (Quinn et. al. 2006) .The diets of people in many developing countries comprise mainly starchy roots, cereals & few legumes. Unfortunately animal sources of proteins which are used to complement the starchy diets are expensive and out of reach for low –income families (Obatolu et al. 2007). Increasing demand for milk has promoted the need to extend search for its substitute not only in order mammals but also from plant source one of the plant source that attracted focus of people is soya plant is commonly available. It grows well in wide range of soil with optimum growth I n moist alluvial soil with a good organic contain. Soymilk as animal milk substitute has been gaining popularity in the dairy industry an also widely consumed.

In recent years different edible varieties of legumes have been identified that have high nutritional value, & therefore could to address a number or diet related problems globally. Soybean (Glycine max) is recognized as one of the crops with huge potential the world over. This plant has been exploited for the manufacture of food products such as soybean fertilized gori & tapioca & cereal-based traditional weaning food (Sanni & sobamiwa, 1994 Osundahunsi & Awor, 2003, Kolapo & sanni 2005). Shrikhand is the indigenous fermented milk product prepared by fermentation of milk using process such as coagulation desiccation.
and fermentation. Shrikhand is extensively used as a sweet dish after meals; it is also a festive sweet in India. Sugar is added as an additive to the shrikhand to enhance its taste and does not have any preservative effect. Other natural additives like dried fruits are added to the shrikhand to enhance flavor. Shrikhand is traditionally made at home in western India. The name shrikhand is derived from Sanskrit world "shikharini" (shrikhand value added traditional dairy products paper).

This fermentation is brought about by bacteria, therefore yoghurt contains millions of live bacteria which are beneficial to the human digestive system. In flavor we utilize the nutmeg as the seed tree is usually in powder form. Nutmeg is full of minerals, such as manganese, potassium, calcium, & iron. It's not just enhance the flavor of your food but also keep your immune system strong, it also helps with skin, pain relief, and brain power. Sugar is source for instant energy; low blood pressure and in case of diabetes, it has fluctuating sugar level. If you are on insulin supplement and do not eat food for a long time, the blood sugar level in your body goes down. At that point of time your body needs row sugar to revive itself. Some are used as lower calories foods substitute for sugar described as artificial sweetness.

**Material and Method**

Collection of soybean sample: - Collection of soybean from market. Production of soymilk (Cornell's method) soymilk was produced by the process described by Wei et al. (1978). Illustrated in the chart below:

100g of soybeans

- Stepped in water for 6 hours
- Boiled for 45 minutes
- Blended while still hot
- Sieved with 1 liter of water
- Extraction was boiled (20 minutes)
- Cooled to 40°C
- 1g salt and 30g sugar added
- Packed (in 1 liter plastic jugs).

**Figure:** Flow diagram illustrating the preparation of soymilk

**Preparation of Soyshrikhand from plant source as a soybean (ICAR 2006):**

Soymilk

- Heating (95°C/15 min)
- Cooling to 30°C
- Addition of 2% curd cultures/lactic acid bacteria/probiotics as starter culture
- Incubation (30°C, 8 hours, till the acidity reaches 1%)
- Curd formation
- Tying curds in muslin cloth for 8 hrs.
- Chakka
- Adding sugar (40% by weight of chakka) & cardamom (1.6% by weight of chakka) flavor & colour
- Mixing/whipping
- Shrikhand

**Lipid test:**

10ml of milk sample was pipette in series of conical flask. 2-3 droplet of phenolphthalein indicator was added to it and mixed it Thorley it was titrated against 0.1N KOH up to color changed from colorless to pink.

**Figure:** - Preparation of soymilk from soybean seed
Soy milk and Soy shrikhand is an expensive remarkable versatile high protein food made from soya bean. Soy milk (plain flavored) is ready to drink and applicable to all section of people suffering from lactose intolerance (infant/ youth/ old pregnant etc). Soy milk is white liquid made from seed and they may consist of pure water, soybean, extract, sugar, salt, flavors and permitted food colors (fig.1). Milk contains all the main food classes, fat, carbohydrates, minerals it supplies people with all the necessary amino acid to form protein as well as vitamins all dispersed in water. Soy shrikhand and this milk utilized for dairy product formation Indian fermented milk product utilized 7% of total milk produced mainly include 3 product dahi, shrikhand and lassi using process such as coagulation desiccation and fermentation (fig.2). The fermented milk products constitute a vital component of human diet like a fat. The lipid contain of soy milk shrikhand compare with the buffalo milk shrikhand. The major contrast in the food proximate content are the values obtained for the fats contents. The concentration of fat obtains in the soy milk shrikhand i.e. 7.3 mg/ml and buffalo milk shrikhand i.e. 12mg/ml (fig.3). It was concluded that the soy milk shrikhand are low in fat as compare to buffalo milk shrikhand. This significant difference showed buffalo milk to be about higher in fat content than soy milk shrikhand. We specially concentrate only on lipid test because fat/cholesterol is a major problem in Indian human being and who does not wish to consume the cow milk / buffalo milk product they can consume soy milk product in high quantity without worry of fat in them. Another good advantage of soy milk shrikhand is that, it also tends to reduce the fat which comes through the consumption of oils and animal fat. The animal milk contains the hormone of animal, they do-contribute to body fat. It has more fiber in it, this very healthy for the digestive system, the omega-3 and omega-6 fatty as well as they phyto-oxidant and it also effectively protect your blood vessels and hemorrhage. The flavor nutmeg utilized in powder form and it also provide the minerals, such as manganese, potassium, calcium, & iron. It's not just enhanced the flavor of your food, but also keeps your immune system strong. it also excellence for your skin, pain relief, and brain power. Sugar is source for instant energy, low blood pressure and in case of diabetes have fluctuating sugar level.

Conclusion
This study is able to establish the close significant difference in chemical characters the acid value method show the least variation in fat concentration. Soy milk shrikhand has resource of protein and low in fat that makes it has a no. of unique properties that make it the most preferred milk and product as compared to other animal milk and product (Figure 3).

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