

puncture resistance is not the exception. The summer 2006 was sunny and warm – the moisture content of the berries was little bit lower compared to other years, and the rupture force had due to that higher values. And also could be pointed out that smaller berries (PSR and German varieties) had higher rupture force.

Physical properties of berries vary with the species and in some extension also with years. As a result of present work we could not point out considerable differences between berry varieties – there were some tendencies, but it was not enough to make final conclusions. More experiments are needed for variety selection.

Among some chemical analyses we have been determined the content of vitamin C,  $\beta$ -carotene, reducing sugars, titratable acidity. Also all these values varied among the varieties and years.

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#### **RHEOLOGICAL MEASUREMENTS FOR STANDARDIZATION OF VISCOSITY OF TEST BOLUS AND FOODS FOR PATIENTS SUFFERING FROM DYSPHAGIA**

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## ABSTRACT

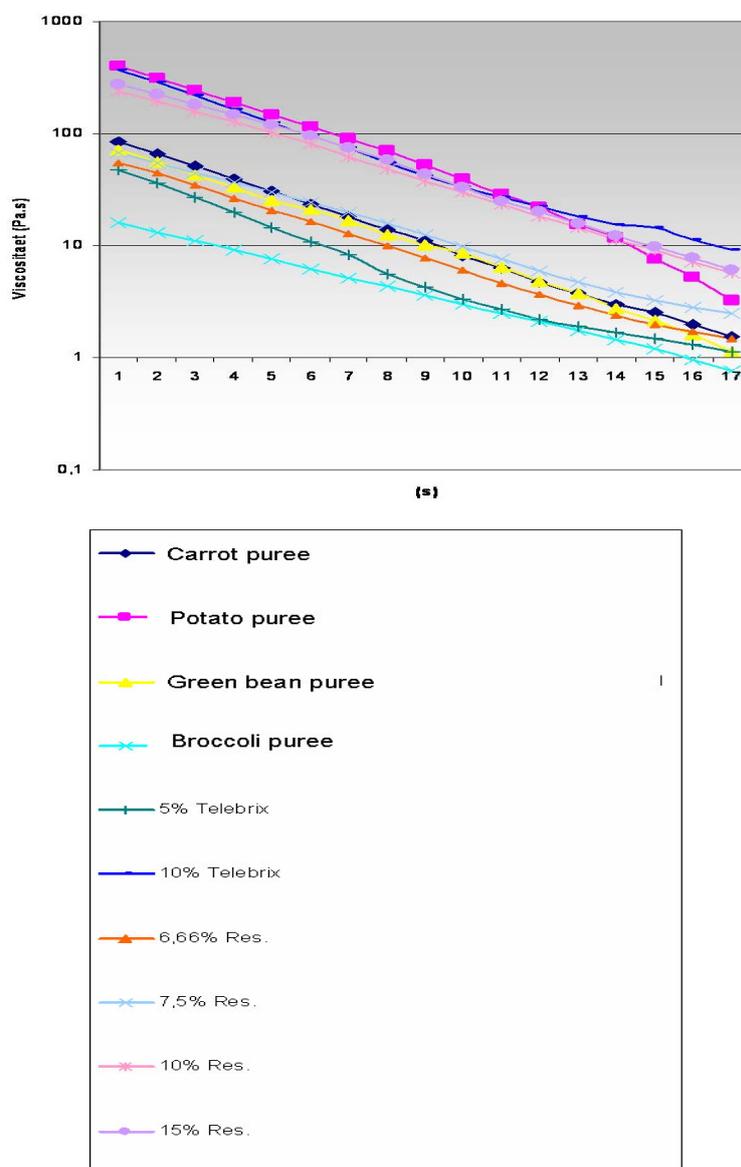


Figure 1  
 Rheograms (flow curves) of test food ( $6.6 \text{ g}/100\text{cm}^3$  -  $15 \text{ g}/100\text{cm}^3$ ),  
 contrast medium ( $5 \text{ g}/100\text{cm}^3$  -  $10 \text{ g}/100\text{cm}^3$ s Telebrix)  
 and vegetable puree (carrot, potato, green bean, broccoli)

Table 1

Comparison of the test foods and real foods (1a) and contrast medium and real foods (1b) on the basis of their viscosity

1a

<b>Test food % Test food g/ 100cm<sup>3</sup> (20°C)</b>	<b>Foods</b>
3.3 g/ 100cm <sup>3</sup>	peach puree(40°C)
	Danone <sup>®</sup> kephir warm(40°C)
	Danone <sup>®</sup> kephir cold(20°C)
5 g/ 100 cm <sup>3</sup>	broccoli puree, warm and cold(40°C and 20°C)
	fruit jelly warm Dini(40°C)
6.6 g/ 100cm <sup>3</sup>	vegetable soup(40°C)
	green pea puree(40°C)
	peach jelly(20°C)
	Danette <sup>®</sup> pudding cold(20°C)
7.5 g/ 100cm <sup>3</sup>	carrot puree (40°C), cold vanilla pudding(20°C)
10 g/100 cm <sup>3</sup>	potato flakes+water+Nutridrink <sup>®</sup> +broccoli pure(40°C)
15 g/ 100cm <sup>3</sup>	potato flakes+water(40°C)
	potato flakes+water+Nutridrink <sup>®</sup> (40°C)
	potato flakes+milk(40°C)
20 g/ 100cm <sup>3</sup>	corn mush(40°C)
	potato purée+water(40°C)
	potato purée+milk(40°C)

1b

<b>Contrast medium and Resource<sup>®</sup> g/ cm<sup>3</sup>(20°C)</b>	<b>Foods</b>
10 g/100 cm <sup>3</sup> Telebrix <sup>®</sup>	potato purée(40°C)
5 g/100 cm <sup>3</sup> Telebrix <sup>®</sup>	Danette <sup>®</sup> vanilla pudding warm, (40°C)Resource <sup>®</sup> 6,6 g/ 100cm <sup>3</sup> (20°C)

Dysphagia is defined as difficulty in swallowing of food and liquids, caused by abnormalities of function of muscles and nerves as well as by damage of structures of the oral cavity, pharynx, larynx and oesophagus. Patients suffering from dysphagia often are unable to swallow food or liquids of certain

physical/rheological properties. Viscosity is a fundamental rheological property both of the foods used for feeding, and the for test foods applied in endoscopic and X-ray swallowing studies. The aim of this study was to determine the viscosities of the test foods as well as those of foods used for feeding in order to compare and standardize them. We prepared an increasingly concentrated series of the test foods (jelly, pudding, puree, mush) by adding thickening substance (Resource Thicken Up<sup>®</sup> (Novartis) made of cornstarch) to water, and then determined the viscosities. We also measured the viscosities of commercially available foods, self-prepared foods of different thickness, and foods with known formulas. From these results we could identify the food formula that corresponded to the test bolus that could be swallowed by the patient without aspiration in the course of a video-endoscopic or X-ray swallowing study. The measurements were taken with a dynamic shear rheometer (UDS200).

#### **ADVANCE METHODOLOGY FOR CONTROL OF CHEMICAL CONTAMINANTS IN FOOD**

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In order to ensure the safety of food, it is necessary to consider all aspects of the food chain from the primary production through the harvesting and storage to the processing and sales and supply of food to the consumer. The main contemporary tendencies in fast screening of food contaminants and residues are discussed. The main steps of laboratory analysis are mentioned. Besides laboratory available methods for precise and relevant analysis, some practical approaches are presented for early detection of contaminants as immunoassay in different formats. Their advantages and disadvantages comparing to the traditional instrumental methods are outlined.

#### **Sources of chemical contamination of plant foodstuffs**

Food is an essential ingredient to life, and access to food is often limiting factor in the size of a given population. Many substances are used to grow the quantity and quality of food needed the human population. Many of the agrochemicals are pesticides (e.g. herbicides, insecticides, fungicides, acaricides, fumigants) that may appear as residues in the food. Other type of agrochemicals that may appear as residues in animal-derived foods are veterinary drugs (e.g. antibiotics, growth promotants, and hormones). Different types of environmental