




Food Preparation Machines
Made in Sweden since 1941 



**Preparation of
texture-modified foods and
beverages** — Good food in elderly care and healthcare



Preparation of texture-modified foods and beverages – Good food in elderly care and healthcare is published by AB Maskiner.

Text: Malin Annebäck and Jan Sigurdh, AB HALLDE Maskiner.

Sources:

The International Dysphagia Diet Standardisation Initiative (IDDSI) – Complete IDDSI material with detailed definitions 2.0 | 2019, follow QR-code.



Livsmedelsverket (Swedish National Food Administration) – livsmedelsverket.se

Dietisternas Riksförbund (National Association of Dietitians in Sweden) – drf.nu

Kost och näring (Diet and nutrition) – kostochnaring.se

Nutritionshandbok (Nutrition Handbook) – Ljusdals kommun, Kjell Olsson

WHO – www.who.int

Cover, layout and artwork originals: Eyeris Reklam, Vendelsö

Images and graphics: Annika A. Lundvall, AB HALLDE Maskiner, Thinkstockphotos.com and stock.adobe.com



AB HALLDE Maskiner
P.O. Box 1165, SE-164 26 KISTA
Tel: +46 8 587 730 00
Fax: +46 8 587 730 30
Website: hallde.com
E-post: info@hallde.com



Food Preparation Machines
Made in Sweden since 1941



Contents

Introduction	5
IDDSI – EIGHT LEVELS OF TEXTURE	7
• Levels 0 – 3: Thin, Slightly thick and Mildly thick.....	8
• Levels 3 – 4: Moderately thick and Extremely thick.....	9
• Levels 5 – 7: Minced and moist, Soft and bite-sized, Easy to chew and Regular	10
TEXTURE SCALE	13
• Whole and cut up.....	14
• Coarse paté	14
• Timbales.....	14
• Jelly	14
• Thick liquid.....	14
• Fluid liquid	14
• Nutritional beverages	14
CHOOSE THE RIGHT MACHINE FOR THE KITCHEN.....	17
• HALLDE Blender	17
• HALLDE Vertical Cutter Blender/Mixers	17
• HALLDE Vegetable Preparation Machines	17
• HALLDE Combi Cutters	17
NUTRITIONAL BEVERAGES AND MULTIPLE MICRONUTRIENT POWDERS	19
• Complete nutritional beverages	19
• Clear nutritional beverages.....	19
• Multiple micronutrient powders.....	19
PLAN GOOD FOOD AND SELECT FOODSTUFFS	21
• Grain, cereals and bread.....	21
• Vegetables	22
• Fruit and berries.....	22
• Potatoes, rice and grain.....	23
• Fresh and cured meats	23
• Fish	24
• Milk and dairy products.....	24
• Sauces and toppings	25



The average life expectancy and average age in the world are increasing, leading to an increasing number of people with dysphagia – difficulties chewing, handling and swallowing foods and beverages. Persons who have difficulty chewing and swallowing often find it challenging to get sufficient energy and nutrition to cover their daily needs. The need to prepare energy- and nutrient-rich foods and beverages with the right texture is therefore essential in order to prevent malnutrition and promote quality of life.

HALLDE has prepared some advice and tips on how food preparation machines can be used to prepare texture-modified foods and beverages for people with dysphagia.

This folder is mainly based on materials and definitions of foods and beverages texture from two sources. Livsmedelsverket (Swedish National Food Administration) and The International Dysphagia Diet Standardisation Initiative's (IDDSI) material.

” *HALLDE’s food preparation machines make it quick and easy to achieve the eight levels of texture for foods and beverages as provided through the IDDSI’s defined tests and methods.*”



IDDSI.ORG



” *The need to prepare energy- and nutrient-rich foods and beverages with the right texture is essential in order to prevent malnutrition and maintain quality of life*”



IDDSI – eight levels of texture

The number of persons suffering from dysphagia in the world is increasing year by year and the need to be able to prepare texture-modified food in a safe manner is therefore vital.

The IDDSI's framework consists of a continuum of eight defined levels of texture, where beverages are measured from levels 0-4 and foods are measured from levels 3-7.

The IDDSI's material provides a common terminology to describe food texture and beverage thickness. In order to determine the level of a preparation/product, the test results specified in IDDSI's test methods must be achieved (see the QR code on page 6).

Beverages are subjected to a flow test and foods to a flow test, fork drip test, spoon tilt test, fork and spoon pressure test. Coarser food textures are even measured in particle size.

HALLDE's food preparation machines make it quick and easy to achieve the texture levels as provided through the IDDSI's defined tests and methods.



Fork pressure test with banana.



Spoon tilt test.



Levels 0-3

Thin, Slightly thick and Mildly thick



BLENDER SB-4

HALLDE BLENDER SB-4

HALLDE Blender SB-4 blends, mixes, whips, chops and stirs from 2 dl up to 3.8 litres.

With a variable speed of up to 15,000 rpm and a 1350-W motor, it is capable of creating extremely smooth and fine textures for e.g. soups, sauces and nutritional beverages. All detachable parts are dishwasher-proof and the transparent jug with the feeding hole in the lid makes it an extremely versatile machine.



“ Meals consisting of many components, or several dishes can increase the amount of food eaten.”





VERTICAL CUTTER



COMBI CUTTER

Levels 3-4

Moderately thick and Extremely thick

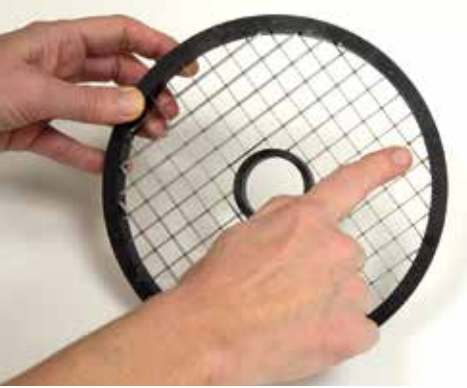
HALLDE VERTICAL CUTTER/BLENDER / COMBI CUTTER

HALLDE's range of Vertical Cutter Blenders/Mixers and Combi Cutters chop, grind, purée and mince both dry and liquid-based, hot and cold ingredients. The unique scraper system and specially designed knives mean that processing is done at lightning speed, which in turn minimises heating of ingredients and therefore ensures the quality and preserves the nutritional content.



“ For many people with dysphagia, meals constitute a physically exhausting activity. It is therefore important that the food is energy- and nutrient-rich so that individual needs are met.”





Levels 5-7 Minced and moist, Soft and bite-sized, Easy to chew and Regular



VEGETABLE
PREPARATION MACHINE



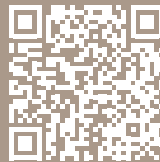
COMBI CUTTER



HALLDE VEGETABLE PREPARATION MACHINE / COMBI CUTTER

With HALLDE's Vegetable Preparation Machines, you can dice into various sizes, minimum 3x6x6 mm, and in various combinations up to a maximum size of 20x25x25 mm. What makes HALLDE's dice graters unique is that all dices are guaranteed not to exceed the specified dimensions on the dicing grid or slicer.

Besides dicing, Vegetable Preparation Machines and Combi Cutters can also slice, cut julienne, grate and cut crimping slices into up to 80 different varieties. Read more in HALLDE's Cutting Tool Guide.



CUTTING TOOL GUIDE



“ People with dysphagia can best handle small portions that are energy- and nutrient-rich. This means reducing the content of carbohydrates and increasing the content of protein and fat.”





TIMBALE



COARSE PATÉ



WHOLE AND CUT UP



JELLY



THICK LIQUID



FLUID LIQUID

“ Since only food that is eaten provides nutrients and energy, it is important to adapt the composition and portion size of the food according to the needs, habits and preferences of the elderly.”

Texture scale

One recognised method of describing various textures of texture-modified food is the texture scale. The textures are divided into the following groups:

- **WHOLE AND CUT UP** - normal texture that is cut up on the plate
- **COARSE PATÉ** - light, soft, consistent and coarse texture
- **TIMBALE** - soft, smooth and consistent, rather like an omelette
- **JELLY** - soft and slippery
- **THICK LIQUID** - smooth and viscous
- **FLUID LIQUID** - smooth and runny.

“ The enjoyment of the meal is enhanced if its various components can be experienced separately. For example, when serving chicken fillet, mashed potatoes, cream sauce and green peas, the texture-modified menu could consist of chicken timbale, mashed potatoes, cream sauce and puréed peas.”



HALLDE MACHINES MAKE PREPARATION EASY

Texture-modified foods



WHAT ARE YOU PREPARING TODAY?

Result	Structure	Texture	HALLDE Vegetable Preparation Machine
WHOLE AND CUT UP	Normal food that is cut up on the place as required.	As for normal food.	X
COARSE PATÉ	Light, soft and coarse-grained.	Like succulent meatloaf. Easy to cut and eat with a fork.	
TIMBALES	Soft, smooth, short and consistent.	Like an omelette, no bits Can be eaten with fork or spoon.	
JELLY	Soft and slippery.	Like currant jelly, no lumps/bits. Can be eaten with fork or spoon.	
THICK LIQUIDS	Smooth and viscous.	Like sour cream. Can be eaten with a fork but drops.	
FLUID LIQUIDS	Smooth and runny.	Like tomato soup (puréed soup) without lumps/bits.	
NUTRITIONAL BEVERAGES	Smooth and runny.	As drinks.	



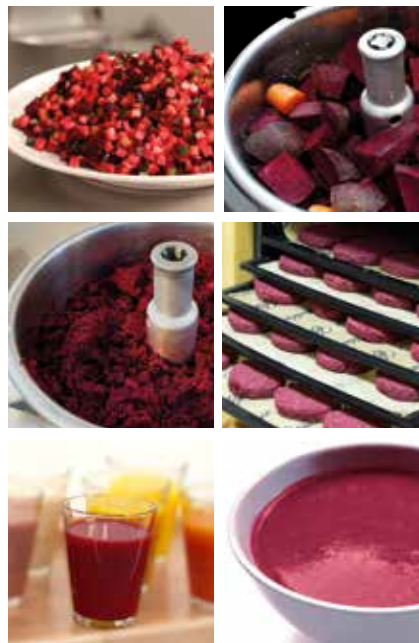
”

What consistency and texture do you want for the food you serve? Use the same menu and then prepare the various textures for the various types of texture prescribed in the texture scale.”

A GOOD CHOICE OF MACHINE

HALLDE Vertical Cutter	HALLDE Combi Cutter	HALLDE Blender
	X	
X	X	
X	X	
X	X	
X	X	X
X	X	X
X	X	X

EXAMPLE OF VARIOUS PRESCRIBED TEXTURES





” Regardless of whether you work in a large or small kitchen, you should choose a machine that processes quickly in order to be able to grind foods without them becoming warm. This facilitates food preparation and preserves the flavours and nutrients in the food.

Read more about the different machines on hallde.com:



*HALLDE
Blender SB-4*



*HALLDE
Vertical Cutters/Blenders*



*HALLDE
Vegetable Preparation
Machines*



*HALLDE
Combi Cutters*

Choose the right machine for the kitchen

HALLDE offers a number of machines that are adapted to prepare texture-modified foods within elderly care and healthcare. Your choice of machine is important. Not just to be able to work quickly and efficiently in the kitchen, but primarily to be able to create the various textures and naturally preserve the taste, colour and nutrients of the food to the extent possible.

HALLDE MACHINES

HALLDE's machines are ideal for preparing texture-modified food where the texture of the final food is just as important as high demands for safety and hygiene.

Our machines are designed with emphasis on:

- Perfect results
- Fast, easy cleaning and highest standards of hygiene
- User-friendly design and the best ergonomics
- A broad range of preparation possibilities
- High capacity
- Sturdy placement, ease of movability and practical storage
- Exemplary safety
- Highest standards of quality.



*HALLDE
Blender SB-4*

*HALLDE
Vertical Cutter/Blenders*

*HALLDE
Vegetable Preparation Machines*

*HALLDE
Combi Cutters*



“ As a care provider, it is important to be aware of the differences between various nutritional beverages and multiple micronutrient powders, when they should be used and how they should be served/added.

Give priority to the most energy-, protein- and nutrient-rich beverages. This makes it easier to reach the daily nutritional requirements.



Nutritional beverages and multiple micronutrient powders

When the need for nutrient and energy cannot be satisfied through a normal diet alone, nutritional beverages are a suitable supplement. Nutritional beverages should be highly energy- and nutrient-rich. A HALLDE Blender is ideal for making your own energy beverages with the help of a nutritionally calculated recipe.

COMPLETE NUTRITIONAL BEVERAGES

A complete nutritional beverage should contain the body's total energy and nutrient need. In theory, this means that it should be possible to exist on nutritional beverages alone. A complete nutritional beverage contains a lot of fibres and is therefore especially beneficial in case of e.g. constipation or diabetes. On the other hand, it is naturally also good to vary the content and prepare beverages with various levels of energy density, amount of protein, fibre content and taste adapted to individual needs.

CLEAR NUTRITIONAL BEVERAGES

Since a clear nutritional beverage is practically fat-free, the beverage has a clear, lemonade-like appearance with a distinctly sweet taste, making it suitable as a mealtime drink, in case of nausea or fat malabsorption. The most energy-rich clear beverages should be prioritised.

For diabetics, the beverage should be consumed in connection with a meal in order to prevent a marked increase in blood sugar level. Vary the energy density, protein content and taste of the clear beverages according to the needs of the elderly person.

MULTIPLE MICRONUTRIENT POWDERS

Three different types of multiple micronutrient powders are available as a complement to nutritional beverages. They are energy-enrichment powder, protein powder and simple fortification powder that can be used to add more nutrition to both food and beverages. Cream or oil added to food or beverages in order to increase the energy content are also considered as enrichment.





” *In order to prepare food that is good, well-composed and meets nutritional recommendations, the organisation should have access to personnel with good dietary knowhow and skills. Such work is often performed by a trained administrative dietician, a dietician or a diet consultant in collaboration with a speech and language therapist.*

Plan good food and select foodstuffs

When planning menus within elderly care and healthcare, it is important to consider energy density, taste and appearance to ensure as good a food experience as possible.

GRAIN, CEREALS AND BREAD

For many persons bread is an important foodstuff at breakfast and with other meals. Bread is rich in carbohydrates and fibre but in most cases it needs to be complemented with dietary fat and cold cuts to increase the energy and protein content.

Cereals and porridge are rich in nutrients. Porridge can be prepared from various types of grain and can be energy enriched by making it with milk or adding dietary fat.



With a HALLDE Combi Cutter/Vertical Cutter Blender/Mixer, you can prepare a tasty cold cut pâté on bread or blend porridge into the desired texture.

VEGETABLES

Most vegetables contain important fibre, vitamins and minerals. At the same time they provide little energy because they contain a great deal of water. Vegetables should be included in both lunch and dinner meals but in small amounts.

Boiled vegetables are easier to chew than raw ones and can be energy enriched and made easier to chew with the aid of a little dietary fat or by stewing them.

Raw vegetables and salads can be cut into small pieces or finely shred and enriched with an oil dressing.



A HALLDE Vegetable Preparation Machine makes easy work of preparing large vegetables such as white cabbage and iceberg lettuce. A good cutting result ensures that the nutritional content is preserved.

FRUIT AND BERRIES

Fruit and berries contain valuable vitamins and minerals. Most fruits and berries also contain fibres, such as pectin, that are good for bowel function. Fruit and berries also provide colour and taste to many dishes.

Fresh fruit has low energy content and can therefore be combined to advantage with foods containing fat, such as desserts. Cooked or conserved fruit and berries can be easier to eat.



With a HALLDE Blender you can blend Vitamin C-rich fruits and berries into energy-rich fruit beverages. Cut into dice with a vegetable cutting tool or make a delicious smooth lemon curd in a Vertical Cutter Blender/Mixer.

POTATOES, RICE AND GRAIN

Potatoes are a basic foodstuff and are often included in lunches and dinners. The taste and nutritional content of boiled potatoes suffer from being kept warm and they should therefore be served as freshly cooked as possible. Gratins, as well as stewed or fried potatoes, are often less affected by being kept warm and have less tendency to lose taste. Mashed potatoes are easy to chew and can be enriched, for example, with dietary fat or cream.

Rice and pasta, as well as bulgur wheat, couscous and various legumes can provide variation in the menu and form a complement to traditional potatoes. Choose what the elderly person likes.



Coarsely chop or mash potatoes to make a tasty mash with the HALLDE Vertical Cutter/Blender. The machine operates at two speeds, making it easy to achieve the desired texture quickly.

FRESH AND CURED MEATS

Most fresh and cured meats are an important source of protein. Cured meats are often easy to chew and the varieties containing fat also provide plenty of energy.

Whole meat can sometimes be difficult to chew and in such cases ground or diced products can be easier to eat. The method of cooking also influences the texture. Even when meat is used in the form of cold cuts it is important to serve a variety that is easy to chew and swallow.



Prepare the same food with various textures depending on the prescribed texture. Make a large portion, divide into silicone moulds and freeze in different sizes and take out as needed.

FISH

Fish is a very important source of essential fatty acids and vitamin D. Fish is easy to chew and both lean and oily varieties of fish can well be included on the menu several times a week. The dietary advice from the Swedish National Food Administration recommends that everyone should eat fish three times a week.

Boiled fish often needs to be complemented by energy rich sauces in order to fulfil recommended levels of energy content. Boiled fish often lacks colour and should therefore be accompanied by more colourful garnishes such as dill, lemon, tomato and vegetables to give it a more appetising appearance.



With a HALLDE Vertical Cutter Blender/Mixer, you can blend fish into the desired texture, from coarse to a smooth purée.

MILK AND DAIRY PRODUCTS

Milk and dairy products are an important source of, for example, calcium. Dairy products with a high fat content give the food more energy content even when the portions are not large.

High-fat milk is more energy-rich than skimmed milk, but has a lower vitamin D content. The type of milk to be served as a beverage is determined by need and taste preferences.



Yoghurt can be served as an accompaniment to various dishes or for breakfast or in-between meals. Cream and crème fraiche can be used in cold and hot sauces, casseroles, soups and other dishes to increase the energy content.

SAUCES AND TOPPINGS

Sauces are an important accompaniment to most dishes. The sauce adds to the taste of the food and can be an important energy supplement if enriched, for example, with dietary fat or cream.

Sauces or dipping sauces can make it easier to swallow the food, and it can therefore be a good idea to offer various creamy accompaniments with dishes, even those not traditionally served with sauce.



Prepare a tasty and nutritional dipping sauce with a HALLDE Vertical Cutter Blender/Mixer and liquid sauces with a HALLDE Blender.

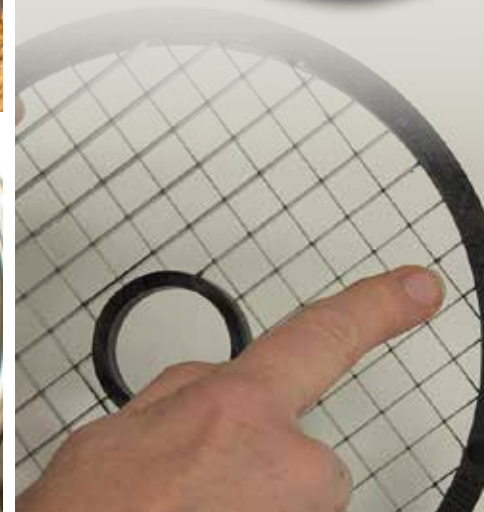
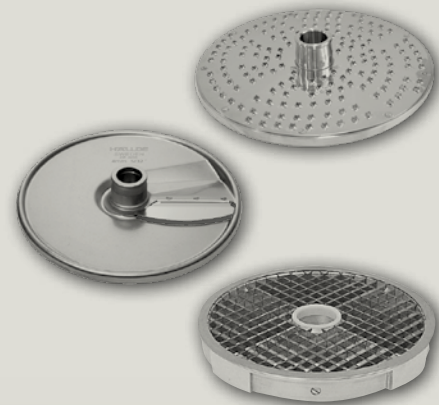
ACHIEVE THE DESIRED TEXTURE QUICKLY

HALLDE's food preparation machines make it quick and easy to achieve the texture levels as provided through the IDDSI's defined tests and methods.





” HALLDE makes high-quality food preparation machines that meet the requirements for preparing texture-modified foods and beverages for people with dysphagia.



What are your needs?

HALLDE makes high-quality food preparation machines that meet the requirements for preparing texture-modified foods and beverages for people with dysphagia. What are your needs? Read more about the machines on HALLDE's website www.hallde.com



*HALLDE
Blender SB-4*



*HALLDE
Vegetable Preparation
Machines*




*HALLDE
Vertical Cutters/Blenders*



*HALLDE
Combi Cutters*



Food Preparation Machines
Made in Sweden since 1941 

MAKE AN ACTIVE CHOICE

This folder only describes a few of our recommended models. Read more about all our models and accessories on HALLDE's website www.hallde.com



*HALLDE
Blender SB-4*



*HALLDE
Vertical Cutter/Blender*



*HALLDE
Vegetable Preparation Machine*



*HALLDE
Combi Cutters*



Food Preparation Machines
Made in Sweden since 1941



The average life expectancy and average age in the world are increasing, leading to an increasing number of people with dysphagia – difficulties chewing, handling and swallowing foods and beverages. Persons who have difficulty chewing and swallowing often find it challenging to get sufficient energy and nutrition to cover their daily needs. The need to prepare energy- and nutrient-rich foods and beverages with the right texture is therefore essential in order to prevent malnutrition and promoting quality of life.

HALLDE has prepared some advice and tips on how food preparation machines can be used to prepare texture-modified foods and beverages for people with dysphagia.

This folder is mainly based on materials and definitions on foods and beverages texture from two sources. Livsmedelsverket (Swedish National Food Administration) and The International Dysphagia Diet Standardisation Initiative's (IDDSI) material.