
Universal Decimal Classification

English full edition
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UDC 664 Preparation and preservation of solid foodstuffs

Classification Décimale Universelle
CDU 664 Fabrication et conservation des aliments

Dezimalklassifikation
DK 664 Herstellung und Konservierung fester Nahrungsmittel

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Foreword

The English version of the Universal Decimal Classification (UDC) is being prepared and published as BS 1000 by the British Standards Institution (BSI) at the original joint request of the British Society for International Bibliography (BSIB) and the Association of Special Libraries and Information Bureaux (ASLIB), now amalgamated as Aslib. It has the approval of the Lake Placid Education Foundation, New York, proprietors of the Dewey Decimal Classification, from which the UDC derives. The English full edition of the UDC is authorized by the International Federation for Documentation (FID), PO Box 90402, 2509 LK The Hague, Netherlands.

This section is part of the English full edition. It should be used in conjunction with the Abridged English Edition, BS 1000A, which refers to many other subjects of interest

not listed in this schedule, and provides a conspectus of the whole scheme, together with an introduction to its use. For further practical information about the principles, application and utilization of the scheme, users should refer to BS 1000C.

This edition of BS 1000 [664], which supersedes the 1971 edition published as part of BS 1000 [663/664], includes modifications authorized in *Extensions and Corrections to the UDC* (FID publication no. 248) up to and including Series 11, No. 3, dated July 1983. Subsequent issues of *Extensions and Corrections to the UDC* should be consulted to keep the schedule up to date. British Standards related to this Part of BS 1000 are listed on the inside back cover.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Scope

Under 664 is classed information about food and the food industry in general, especially the preparation of solid foodstuffs.

Produce of domestic animals and game, including milk, butter, cheese, eggs and meat, comes under 637/639.

Cookery and meal preparation come under 641.

Related subjects

351.77	Supervision of public health and hygiene
543	Analytical chemistry
613.2	Hygiene of nutrition (diet)
614.3	Sanitary inspection. Inspection of food
63	Agriculture and related sciences and techniques, <i>especially</i>
633	Field crops and their production
634	Horticulture generally
635	Garden plants. Gardening
636/639	Animal breeding. Animal produce. Hunting. Fishing
641	Foodstuffs. Cooking. Dishes — Home economics
642	Meals. Table utensils. Tableware
663	Industrial microbiology. Industrial mycology. Fermentation industry. Beverage industry. Stimulant industry
665	Oils. Fats. Waxes. Adhesives. Gums. Resins

Auxiliary signs and subdivisions

Full information about the common and special auxiliary signs and subdivisions (often abbreviated to 'common and special auxiliaries') will be found in BS 1000A and BS 1000C.

Colon sign of relation. For the classification of information for the public, as in abstracts and bibliographies, maximum use of colon combination rather than of common or special auxiliaries is recommended. The use of the colon sign of relation is preferable for multiple entry systems, as it will help prevent the concealment of information. This usually results in longer notation, however, and for information for more restricted use the application of auxiliaries, where available, may be simpler and more convenient provided that there is an adequate alphabetical subject index.

Common auxiliaries. The common auxiliaries of language = . . . , form (0 . . .), place (1/9), race and nationality (= . . .), time "...", point of view .00 . . . , materials -03 . . . and persons -05 . . . are applicable throughout the UDC. However, they should be used mainly to express concepts not otherwise provided for in the schedules.

Special auxiliaries. The -2/-8 special auxiliaries listed under 62 and the -9 and .0 special auxiliaries listed under 66 are applicable throughout the schedule. The .0 special auxiliaries listed under various subdivisions of 664 are applicable only to subdivisions of the number under which they are listed, except that those listed under 664.8 are also applicable to 664.9.

Typographic presentation

Small type is used for cancelled numbers and text. The arrow → means either 'see' or 'see also' according to the context. The symbol $\cong$ 'subdivide as' means that the number preceding it may be subdivided in the same way as, and with meanings analogous to the subdivisions of, the number which follows it.

SCHEDULE

664 PREPARATION AND PRESERVATION OF SOLID FOODSTUFFS

Details of state, condition, form of foodstuffs may be denoted by the -4 special auxiliaries listed under 62, e.g.

664-404 Liquid state

.8 Colloidal state in the liquid phase. Gels. Foams

.9 Semi-colloidal state. Pastes. Doughs

-405 Solid state

-41 Slabs. Bars. Strip

-42 Solid sections. Profiled objects

-43 Solid objects of various shapes

-436 Spherical and spheroidal objects

.1 Balls. Pearl form

-492.2 Powdered

.3 Granulated

-493 Small irregular pieces. Chipped.

Shredded

.5 Flakes

-494 Formed of irregular fibres, e.g. felt-like forms

664.1 SUGAR. MOLASSES. GLUCOSE ETC.

Special auxiliary subdivisions for 664.1

664.1.03 EXTRACTION AND PURIFICATION OF JUICE

—633.6 Sugar and starch plants

.031 Preliminary operations in general. Washing. Heat treatment etc.

.032 Cutting. Grating, grinding

.1 Grating, grinding

.2 Cutting. Cutting the cane. Cutting root crops

.3 Ridge knives

.9 Other equipment for cutting the raw materials

.033 Extraction in general. Extraction equipment in general

.2 Equipment with intermittent feed

.4 Equipment with continuous feed

.034 Extraction by pressing, by milling

.2 Roll mills. Rollers. Crushers

.4 Imbibition

.6 Extraction by methods involving pressing or wringing

664.1.034.6 $\approx$ 621.979.6, e.g.

664.1.034.625 Extraction using trough presses

.035 Other extraction methods

.1 Extraction by diffusion

.5 Extraction by centrifuging

664.1.035.5 $\approx$ 66.067.5

.6 Extraction by maceration

.7 Extraction by solvents or other chemical agents

.9 Conveyance of juice

.037 Purification of juice in general

.1 Mechanical methods. Filtration

.038 Treatment of juice by chemical agents

.2 Defecation, clarification

.22 Defecation with milk of lime

.24 Defecation with quicklime

.3 Carbonation

.4 Treatment with sulphur dioxide

.5 Methods involving oxidation or reduction

.6 Methods involving bases or acids

.62 Methods involving alkalis or bases

.63 Methods involving acids

.7 Other chemical methods

.8 Treatment and extraction of residues from defecation, carbonation or treatment with sulphur dioxide. Treatment and extraction of waste waters

.039 Treatment of juice by physical or physicochemical methods

.2 Methods involving adsorbents (bone black, activated carbon)

664.1.039.6

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.048

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664.1.05

.052

.053

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.054

.055

.056

.057

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Principal divisions (continued)

664.11

.111

.113

.117

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.7

.8

664.12

.121

.123

Thermal methods

Electrical methods

Evaporation. Distillation

Evaporation in air

Evaporation under vacuum

For further subdivisions see under 66.048

FILTRATION OF SYRUP. BOILING.

REFINING. CRYSTALLIZATION

Filtration of syrup

Boiling of filtered syrup. Methods of boiling

Boiling in air

Boiling under vacuum to clarify

Boiling under vacuum to grains

Boiling with stirring

Crystallization

Separation of sugar and syrup. Centrifuging

664.1.055 $\approx$ 66.067

Removal of harmful substances

Sugar refining

Dissolving

Clarification

Purification

Filtration of liquor. Boiling

Filtration of liquor

Boiling until crystallization

Separation. Centrifuging

Refined sugar in general

Candy sugar

664.1.058 $\approx$ 664.1.057, except

Crystallization at normal pressure

Kinds of candy sugar. White, black, yellow

candy sugar

664.123.4	Extraction of cossettes	664.143.72	Machines for production of sugar confectionery with solid centres. Dragee machines
.6	Treatment of cossettes after extraction. Drying		
.126	Classification of intermediate products	.74	Machines for production of sugar confectionery with liquid centres
.1	Juice		Other machines and equipment
.4	Boiling products	.8	Equipment for decorating sugar confectionery
.43	First crop of crystals	.83	Equipment for cleaning sugar confectionery (equipment for removing powder, brushing off dust)
.45	Second crop of crystals	.84	Equipment for cutting up and cutting out sugar confectionery
.47	Third crop of crystals		Cooling, drying etc. of sugar confectionery
.48	Poor run-off syrups. Rich run-off syrups		Various sugar confectionery products
.127	Saleable products from sugar beet	.85	—663.916 Production of chocolate confectionery and sweets
.1	Crude sugar. Mixtures for refining		664.8.035.59 Sugaring after drying.
.7	Various kinds of beet sugar according to colour	.86	Candying. Crystallizing
.8	Various kinds of beet sugar according to form	.144/.149	Filled sweets. Bonbons. Gums. Fondants. Dragees. Pastilles. Lozenges. Sweets mixed using cocoa or containing preserved fruit, syrups, almonds, hazel nuts etc.
664.13	VARIOUS SUGARS		Marzipan, nougat etc.
.132	Maple sugar	.144	Caramelized confectionery. Toffees
.133	Palm sugar		Barley sugar
.134	Sorghum sugar		Sweetened liquorice. Liquorice lozenges, pomfret-cakes. Cough sweets, lozenges. Marshmallows etc.
.135	Milk sugar		Other sugar confectionery
.1	Sugar from buttermilk	.145	
.136	Malt sugar (maltose)	.146	
.137	Other disaccharides	.147	
.138	Raffinose. Melitose	.148	
.139	Sugars other than monosaccharides		
664.14	PROCESSING OF SUGAR. PRODUCTS BASED ON SUGAR. SWEETS. SUGAR CONFECTIONERY	.149	
.141	Casting, moulding and cutting of sugar	664.15	MOLASSES. TREACLE. SYRUP
.6	Manufacture of sugar loaves	.151	Kinds of molasses
.61	Moulds for sugar loaves	.1	Molasses from cane sugar
.62	Pouring into moulds. Casting	.2	Molasses from beet sugar
.63	Drainage. Clarification. Green syrup. Suckers	.3	Molasses from other sugars
.64	Tapping from the mould		664.151.3 ≈ 664.13
.65	Drying. Packaging	.152	Extraction of sugar from molasses
.7	Production of sugar in lumps, cubes and other forms (other than sugar loaves)		<i>To denote the kind of sugar, each of the following subdivisions may be subdivided as 664.11/.13, e.g.</i>
.71	Casting of cube sugar		664.152.12 Extraction of sugar from beet molasses by osmosis
.712	Casting with centrifuging	.1	Processes using osmosis
.713	Casting without centrifuging	.2	Processes using washing, elution
.72	Breaking. Breaking machines	.3	Processes using precipitation of calcium saccharate
.73	Sawing. Cutting	.4	Processes using strontia
.79	Wrapping. Wrapping combined with casting	.5	Processes using barium hydrosulphide.
.8	Use of low-grade products of refining	.6	Baryta process
.81	Production of low-quality loaf sugar (chunks, bastard sugar)	.7	Processes using lead saccharate
.82	Production of powdered sugar. Ground sugar	.153	Other processes
.143	Sugar confectionery in general		Treatment of molasses to obtain alcohol, rum etc.
.1	Boiling of sugar. Evaporating pans. Equipment for cold production of syrup. Sugar syrups		—663.5 Alcohol. Spirits. Alcohol distillation, refining
.2	Machines and equipment for drawing sugar	.154	Production of foodstuffs from molasses
.3	Kneading machines for sugar confectionery. Mixing apparatus. Machines for working up raw materials	.157	Molasses syrups (treacle)
.36	Treatment of almonds etc. Blanching equipment. Grinders. Chopping equipment		664.157 ≈ 664.151
.4	Steaming equipment. Crystallizing equipment	664.16	DEXTRIN. MONOSACCHARIDES (MONOSES). GLUCOSE
.5	Moulds for sugar confectionery	.161	Dextrin
.57	Transport of moulds	.1	Dextrin production by roasting in general
.58	Cleaning of moulds	.11	Roasting process proper
.6	Moulding machines (including those combined with wrapping machines)	.12	Roasting equipment
.61	Rolling machines. Rolling cylinders		<i>The fuel or heat source may be denoted by the -6 special auxiliaries listed under 62</i>
.62	Pouring machines for gums and fondants	.13	Cooling
.63	Machines for production of drops, pastilles, lozenges	.14	Cooling equipment
.66	Various kinds of press. Presses for liquorice, cachous etc.	.15	Moistening
.68	Shaking tables for moulding sugar confectionery. De-aerating devices	.16	Moistening equipment
.7	Machines for production of pralines, dragees, filled sweets	.17	Roasting processes without addition of chemicals
	—663.916.2 Moulding of chocolate confectionery and sweets	.177	British gum
		.2	Roasting processes with addition of chemicals
		.22	Processes using nitric acid
		.23	Processes using sulphurous acid
		.24	Processes using ozone

664.161.29	Other processes	664.2.034.15	Pulp
.3	Production using dilute acids without roasting	.17	Residual liquids. Albuminoids
.32	Treatment with acid	.2	Other mechanical methods for separating most of the albuminoids
.33	Drying	.23	Removal of albuminoids by centrifuging.
.34	Pulverizing. Screening	.3/.6	Starch production
.4	Production using diastases. Biological methods	.3	Chemical treatment
.5	Other methods of production	.4	Treatment with alkaline lyes
.7	Varieties of dextrin according to their physical properties	.5	Treatment with sulphurous acid
.72	Coloured dextrin	.6	Treatment with alcoholic lyes
.73	Insoluble white dextrin	.035	Other chemical treatment
.76	Soluble white dextrin	.036	Washing of the pulp. Cylindrical sieves. Sets of sieves
.8	Dextrin according to origin	.037	Bleaching processes. Other intermediate treatment
.162	Glucose. Dextrose (grape-sugar)	.2	Separation of crude starch
Special auxiliary subdivisions for 664.162		.3	Separation by sedimentation
664.162.031	Preliminary operations	.4	Separation by centrifuging
.2	Preliminary treatment of raw materials	.038	Separation by air suction in troughs
.3	Suspension of starch. Preparation of starch milk	.047	Purification of crude starch. Scrubbers
.036	Hydrolysis. Neutralization		Drying of starch
.1	Hydrolysis in general		664.2.047 $\approx$ 66.047
.2	Saccharification by acids	664.2.05	OPERATIONS AFTER DRYING
.22	Hydrochloric acid		<i>The products obtained from these operations are also classed here</i>
.23	Sulphuric acid	.051	Deodorization
.25	Oxalic acid	.052	Bleaching
.29	Other acids	.053	Blueing
.3	Conversion equipment	.054	Screening. Bolting. Grinding
.4	Hydrolysis by other methods	.055	Forming. Milling. Pearling. Various products
.43	Hydrolysis by electrolytic methods	.1/.5	Forming. Products of various forms
.48	Hydrolysis by biological methods	.1	Powdered starch
.8	Neutralization	.2	Crystal starch
.037	Filtration after neutralization	.3	Lump starch
	664.162.037 $\approx$ 66.067	.4	Pearl starch. Sago starch
.038	Colour development during preparation.	.5	Other forms. Flakes
	Precautions against colour development	.6	Products of variable quality
.048	Concentration. Evaporation	.7	Starch residues
	664.162.048 $\approx$ 66.048	.057	Liquid and semi-liquid products
.052	Filtration after concentration	.1	Suspensions of starch in water (starch milk)
	664.162.052 $\approx$ 66.067	.2	Starch paste
.065	Solidification. Crystallization	.058	Preparation of thin-boiling starch (soluble starch)
	664.162.065 $\approx$ 66.065	.2	Preparation of thin-boiling starch by physical or mechanical methods
Principal divisions (continued)		.22	By heating in water and drying the solution
664.162.1/.6	Methods of preparation	.23	By milling or other mechanical methods
.1	Preparation from potato starch	.4	Preparation of thin-boiling starch by chemical methods
.2	Preparation from maize starch	.42	Using halogens
.4	Preparation from rice, tapioca and other kinds of starch	.43	Using other inorganic substances
	664.162.4 $\approx$ 664.2	.47	Using organic substances
.6	Preparation from wood, from cellulose	.9	Preparation of thin-boiling starch by other chemical, physical or physicochemical methods
.7	Various products	.059	Preparation of starch that swells in cold water (pre-gelatinized starch). Other methods
.73	Crystal syrup	.1	Generalities on pre-gelatinized starch
.74	Semi-crystalline syrup	.2	Preparation of pre-gelatinized starch by physical or mechanical methods
.79	Other syrups	.22	By heating in water and drying the solution
.164	Mixtures containing glucose	.225	Swelling starch
.2	Invert sugar	.23	By milling or other mechanical methods
.4	Artificial honey	.4	Preparation of pre-gelatinized starch by chemical methods
.165	Various hexoses. Galactose. Fructose etc.	.42	Using halogens
.169	Monosaccharides other than hexoses	.43	Using other inorganic substances
		.47	Using organic substances
664.2	STARCH-CONTAINING MATERIALS.	.7	Methods of rendering starch insoluble in water
	STARCH	.9	Other methods
Special auxiliary subdivisions for 664.2		Principal divisions (continued)	
664.2.03	TREATMENT PRIOR TO DESICCATION	664.22/.27	VARIETIES OF STARCH
.031	Operations prior to crushing and grinding	664.22	POTATO STARCH (FARINA)
.2	Washing. Cleaning of raw materials	664.23	CEREAL STARCHES IN GENERAL
.4	Maceration	.231	Wheat starch
.032	Processes and equipment for comminution of raw materials, including those with addition of chemical products		
.1	Crushing		
.2	Grinding		
.033	Processes for opening up the cells by fermentation		
.034	Methods of increasing the yield of starch and eliminating other substances		
.1	Rinsing, filtering and washing to separate most of the cellulosic matter		

664.232	Rye starch	664.314	Edible oils in general
.233	Buckwheat starch. Oat starch. Barley starch	.6	Edible oil emulsions
.235	Cereal starches other than those given above	.315	Edible fats in general
	664.235 $\approx$ 633.17, e.g.	.6	Margarine in general
	664.235.4 Sorghum starch. Milo starch	.63	Margarine cheese
.236	Gluten	.7	Shortening
664.24	RICE STARCH	664.32	EDIBLE ANIMAL OILS AND FATS
		.324	Edible animal oils
664.25	MAIZE STARCH (CORN STARCH)	.6	Animal oil emulsions
.258	Cornflour starch	.325	Edible animal fats
		.6	Margarine of animal origin
664.26	STARCHES FROM VARIOUS FRUITS	664.33	EDIBLE VEGETABLE FATS
.262	Chestnut starch. Horse-chestnut starch	.336	Margarine of vegetable origin
.263	Nut starches		
.266	Soya starch	664.34	EDIBLE VEGETABLE OILS
.267	Bean starches. Haricot starch. Lentil starch	.346	Vegetable oil emulsions. Mayonnaise
664.27	OTHER EDIBLE STARCHES	664.35	MINERAL OILS AND FATS FOR THE FOOD INDUSTRY
.271	Arrow-root starch		
.272	Manioc starch (cassava starch, tapioca starch)	664.36	MIXTURES OF EDIBLE FATS
.273	Sago starch	.366	Mixtures of butter and margarine
.274	Banana starch		
.275	Yam starch	664.38	PROTEIN FOODSTUFFS
.276	Canna starch		
.278	Starches from stems, stalks and various roots	664.4	MINERAL FOODSTUFFS. COOKING SALT
.279	Starches from tubers and bulbs not mentioned elsewhere	664.41	COOKING SALT. SALT FOR DOMESTIC USE
.1	Sweet potato starch		<i>For salt production from sea water — 661.422</i>
.2	Jerusalem artichoke starch		
.9	Other tuber starches	664.44	COOKING SALT SUBSTITUTES. SALT MIXTURES
664.28	STARCH DERIVATIVES		Mixtures of sodium chloride and phosphates or other edible salts
.282	Oxidized starch derivatives	.441	Mixtures of sodium chloride and substances influencing moisture content and powder form
.283	Halogenated starch derivatives		
.284	Nitrated starch derivatives (non-explosive)	.442	
.286	Ethers. Esters		
664.29	PRODUCTS ASSOCIATED WITH STARCH	664.48	VARIOUS MINERAL FOODSTUFFS, INCLUDING THOSE WITH ORGANIC ADDITIVES. CALCIUM SALTS ETC.
.292	Pectin		
664.3	EDIBLE OILS AND FATS. MARGARINES. PROTEIN FOODSTUFFS	664.5	SPICES AND CONDIMENTS
Special auxiliary subdivisions for 664.3			<i>For condiments and condiment plants — 633.82/.84</i>
664.3.032	Plant and equipment		<i>For aromatic herbs, plants for seasoning — 635.7</i>
.1	Emulsifying, homogenizing and grinding equipment	664.51	PEPPERS. ORIGIN, HARVESTING, PREPARATION
.2	Churns		Black pepper
	—637.024 Equipment for altering the physical condition of produce. Homogenizers. Churns etc.	.511	White pepper
.3	Washing equipment	.512	Long pepper
.4	Mixers	.513	Cubeb pepper (Java pepper)
.7	Cooling equipment	.514	Pepper substitutes and adulterations
.8	Moulds. Cutting equipment	.515	Mixtures of other seeds
.9	Other equipment		Manufacture of substitute or imitation seeds
.033	Processes	.1	Manufacture of ground pepper
.1	Emulsifying. Emulsifying agents	.2	
.2	Churning	.3	
.3	Drying. Washing	664.52	PUNGENT PEPPERS. AROMATIC PEPPERS
.4	Working. Mixing	.521	Pungent peppers
.5	Salting. Chemical preservation	.1	Capsicums. Red peppers
.6	Pasteurization. Sterilization	.11	Capsicums (chillies). Paprika. Spanish pepper
.7	Cooling	.2	Capsicum extracts. Cayenne pepper
.8	Moulding. Cutting	.21	American peppers
.9	Other processes	.22	Calicut peppers
.92	Colouring	.23	Indian peppers
.93	Flavouring	.522	Aromatic myrtaceous peppers
.94	Addition of vitamins	.1	Pimentos (allspice)
.035	Packaging. Transport	.2	Thevet pepper from West Indies
.098	Various biological processes	.3	Tabasco pepper. Tobago pepper
Principal divisions (continued)		.4	West Indian bayberry (wild clove)
664.31/.36	PREPARATION OF VARIOUS PRODUCTS	664.53	MUSTARD
	<i>For buttermaking — 637.2</i>	.531	Raw materials. Mustard seeds. White mustard. Black mustard. Mustard vinegar.
	<i>For oils, fats, waxes — 665</i>		Grey mustard. Red mustard
664.31	EDIBLE OILS AND FATS IN GENERAL		

664.532	Dried mustard. Mustard powder	664.641.113	High-extraction flour
.533	Mustard paste	.115	Low-extraction flour
.534	Mustard tablets	.117	Comparison of different degrees of extraction
.538	Recovery of mustard oil	.12	Wheat flour
			<i>Each of the .12/.19 subdivisions may be further subdivided as 664.641.11, e.g.</i>
664.54	NUTMEG		664.641.122 Whole wheat flour
664.55	GINGER	.14	Rye flour
		.15	Maize flour
664.56	CINNAMON. CASSIA	.18	Rice flour
.561	Cinnamon. Cassia	.19	Other cereal flours
.1	Sri Lanka cinnamon	.2	Other flours. Potato flour. Soya flour etc.
.2	Cayenne cinnamon	.22	Buckwheat flour
.3	China cinnamon	.4	Mixtures of cereal flour with other flours
.4	Java cassia. Sumatra cassia	.642	Yeast. Leaven
.5	Padang cassia	.1	Baker's yeast
.562	Other kinds of cinnamon		—663.126 Baker's yeast. Pressed yeast
.1	Malabar cinnamon. Indian cinnamon	.2	Leaven. Preparation of leaven
.2	White Mexican cinnamon	.643	Artificial leavening agents. Baking powders
.3	West Indies cassia. Sri Lanka cassia		—664.654.2 Dough leavening by chemical and physical means
.563	Cinnamon substitutes and adulterations		<i>Further particulars may be denoted by the .01 special auxiliaries listed under 664.64, e.g.</i>
.1	Adulteration of whole cinnamon. Bark scrapings		664.64.016.8 Technological properties.
.2	Adulteration of ground cinnamon. Powders from spent bark		Gas-producing capacity
664.57	VANILLA	.644	Other raw materials for baked products.
.571	Commercial varieties of vanilla. Frosted vanilla. Dried vanilla. Vanillons		Flour improvers
.572	Vanilla substitutes and adulterations		—664.746 Treatment of flour to improve baking quality and colour
664.58	SEASONINGS, FRUITS, VEGETABLES PRESERVED IN VINEGAR ETC.	.1	Salt
.582	Gherkins. Capers etc.	.2	Yeast food. Fermentation stimulants. Mineral products
.583	Pickles. Piccalilli	.3	Fatty substances. Shortening
.584	Preserved olives		<i>For manufacture of fatty substances — 664.3</i>
.589	Other preserved vegetables etc.	.31	Fats
664.59	OTHER SPICES AND CONDIMENTS	.33	Mixtures of fat and syrup
.592	Seeds etc. containing essential oils	.4	Products rich in protein
	664.592 ≈ 665.52	.41	Milk
			<i>Further particulars may be denoted by colon combination with the subdivisions of 637.1</i>
664.6/.7	TECHNOLOGY AND PROCESSING OF CEREAL GRAINS (MILLING, BAKING ETC.)	.42	Dried milk
		.44	Eggs. Egg white
664.6	BAKING. BREAD AND FLOUR CONFECTIONERY	.5	Products rich in enzymes
		.51	Amylase-containing products. Malt extracts.
664.61	BAKERIES. KINDS OF BAKERY. BAKERY EQUIPMENT. GENERAL MATTERS	.53	Fungal amylases etc.
		.59	Proteinase-containing products
664.64	RAW MATERIALS AND SEMI-MANUFACTURED MATERIALS FOR BAKED PRODUCTS		Preparations rich in other enzymes
		.6	<i>Further particulars may be denoted by colon combination with the subdivisions of 577.15</i>
Special auxiliary subdivisions for 664.64		.61	Carbohydrate-containing products
664.64.014	Chemical properties. Chemical analysis	.63	Sugars
.016	Non-chemical properties. Quality, its determination and evaluation	.7	Saccharified flours
.3	Physical properties. Structure. Particle size. Colour. Content of other flours etc.	.8	Water-absorbing products. Dextrinized flours.
	<i>Further particulars may be denoted by colon combination with the subdivisions of 53</i>	.9	Gums. Alginates. Carob seed flour etc.
.7	Biological properties. Taste. Aroma. Nutritive value	.646	Softeners. Emulsifying agents. Polyethylene stearate. Lecithin etc.
.76	Microbiological properties	.647	Other improving agents
.8	Technological properties. Baking quality etc.	.1	Dusting powders for baking pans. Pan grease. Pan coatings
.019	Spoilage. Deterioration. Discoloration	.2	Various bakery raw materials
	664.64.019 ≈ 620.19	.3	Emulsion-type improvers for white bread
.022.39	Enrichment	.4	Rusk jellies
	<i>For enrichment of milling products — 664.748</i>	.6	Fruit pulps and other fruit products
.03	Storage	.649	Semi-manufactured products for filling pastry, e.g. almond paste, marzipan, nougat
Principal divisions (continued)			Cake flour. Prepared mixes
664.641	Meal and flour. Composition, selection etc.	664.65	Other raw materials
.1	Cereal flours. Wheat flour. Rye flour etc.		BAKING. PREPARATION, PROCEDURE AND PLANT FOR BREAD AND FLOUR CONFECTIONERY
.11	Cereal flours according to degree of extraction		Special auxiliary subdivision for 664.65
.111	Whole grain	664.65.05	Bakery machinery in general
.112	Wholemeal flour		Principal divisions (continued)
		664.651	Preparation of raw materials and ingredients

664.651.2	Cleaning. Sieving. Blending	664.655.12	Baking by heat convection
.4	Weighing	.13	Baking by heat radiation
.6	Addition of liquids	.14	Baking by high-frequency heating
.652	Addition of leavening agents	.19	Baking by other methods
.653	Mixing, kneading and handling of dough for bread and other bakery products	.3	Frying in fat
	<i>Machinery may be denoted by the .05 special auxiliary listed under 664.65</i>	.5	Surface treatment of bakery products after baking. Washing etc.
	<i>Machinery details may be denoted by colon combination with the subdivisions of 621.929, with addition of the -2 special auxiliaries listed under 62 if required</i>	.6	Utensils and equipment for baking. Baking pans, boards etc.
.1	Mixing and kneading	.656	Treatment of baked products
.11	Hand mixing and kneading. Kneading troughs, tables and auxiliary equipment	.3	Cooling. Freezing
.12	Mechanical mixing and kneading	.4	Filling
.122	Batch mixing and kneading	.5	Decorating etc.
.124	Continuous mixing and kneading	.6	Cutting
.3	Weighing. Dividing	.7	Wrapping
.4	Moulding and treatment of dough (particularly for breadmaking)	.657	Measures for prevention of staleness in baked products. Treatment of stale products
	<i>Further particulars may be denoted by colon combination with the subdivisions of 664.66 and 664.68, e.g.</i>		→664.66.019 Deterioration. Faults. Staling
	664.653.4:664.664.33 Moulding and treatment of dough for rusk production	664.66	BAKERY PRODUCTS IN GENERAL. BREAD AND ALLIED PRODUCTS
	:664.681.1 Moulding and treatment of dough for biscuit production		→664.68 Manufacture and treatment of biscuits, wafers, pastries, cakes, puddings
	:664.683.6 Moulding and treatment of dough for cake production		<i>Further particulars may be denoted by common auxiliaries, e.g.</i>
.5	Direct conversion of grain into bread		664.66(083.12) Bakery recipes
.6	Special treatment of dough		.66.002.38 Bakery substitutes
.8	Kinds and properties of dough		.66.002.68 Bakery waste, residues, scrap
.016.8	Technological properties of dough and their testing. Apparatus used (amylograph, extensograph etc.)	Special auxiliary subdivisions for 664.66	
.654	Natural and artificial dough leavening. Dough fermentation	664.66.014	Chemical properties. Chemical analysis
	→577.15 Enzymes. Catalysts of biological reactions. Enzymology	.016	Non-chemical properties. Quality, its determination and evaluation
	663.1 Microbiological industries. Science and technique of applied microbiology		664.66.016 ≈ 664.64.016
.1	Dough fermentation by means of biological agents	.019	Deterioration. Faults. Staling
.11	Dough fermentation by means of yeast		664.66.019 ≈ 620.19
.112	Direct method (straight dough)	.022.3	Special additives
.114	Indirect method (sponge dough)	.39	Enriched products
.12	Dough fermentation by means of leaven biological agents	.03	Storage. Preservation
.14	Dough fermentation by means of other biological agents	.036.5	Canned products
.2	Dough leavening by chemical and physical means	.047	Dried products
.22	Chemical processes (with baking powders etc.)	Principal divisions (continued)	
	→664.643 Artificial leavening agents. Baking powders	664.661	Bread, rolls and buns exclusively or mainly from whole grain wheat, wholemeal wheat or wheat flour
.24	Physical processes (with solid carbon dioxide etc.)	.1	Degree of extraction
.28	Other physical or chemical processes (Rank process etc.)		664.661.1 ≈ 664.641.11
.3	Fermentation accelerated by the addition of fermentation stimulants (yeast foods)	.2	Plain bread without special additives other than improving agents
.4	Special fermentation processes	.21	Loaf bread
.6	Fermentation rooms and cabinets	.212	Wholemeal loaf bread
.63	Non-mechanical	.26	Rolls. Muffins etc.
.65	Mechanical	.3	Bread with special additives (eggs, milk, fat etc.)
.655	The baking process. Other finishing of bakery products. Influence of these processes on the products	.4	Bread with addition of dried fruit
	<i>Bakery ovens may be denoted by the .041 special auxiliaries listed under 66</i>	.46	Currant buns
.016.8	Technological properties of bakery products. Baking tests	.662	Bread exclusively or mainly from whole grain rye, rye wholemeal or rye flour. Rye bread. Pumpernickel
.1	Baking in ovens	.663	Bread from meals or flours other than those of wheat and rye
.11	Baking by heat conduction, convection and radiation	.2	Bread from barley
		.3	Bread from millet (<i>Panicum</i> spp.)
		.4	Bread from maize
		.5	Bread from milo, dhurra, kaffircorn (<i>Andropogon sorghum</i>)
		.9	Bread from other meals or flours
		.664	Bread-like products that require a special manufacturing process or recipe
		.2	Unleavened bread
		.3	→664.681.6 Crackers. Matzos
		.32	Dry baked products
		.33	Toast
		.34	Rusks
		.4	Crispbread. Krustenbrot. Waffelbrot
		.9	Fat-rich products. Scones. Brioches.
			Butterstollen
			Other kinds

664.665	Bread-like products with special properties or for special purposes. Dietetic bread, including children's rusks —664.681.1 Biscuits in general	664.696.2	Puffed cereals. Popcorn
.667	Gingerbread. Other spiced breads	.3	Shredded cereals
.2	Mainly from wheat flour (Dijon type)	.4	Granular ready-to-serve cereals
.3	Spiced cake mainly from rye flour (pain d'épices, Cougne type)	.9	Other ready-to-serve cereals
.668	Bread-like products for animal feeding-stuffs —636.086 Individual vegetable feeding-stuffs	.699	Other processed cereal products
.2	Feeding-stuffs for dogs, e.g. dog biscuits	664.7	CEREAL TECHNOLOGY. FLOUR AND CORN MILLING. GRAIN PROCESSING <i>For treatment of grain in alcohol production — 663.531</i> <i>For cereal coffee — 663.942</i> <i>For cereal starches — 664.23/.25</i> <i>For bread and flour confectionery 664.6</i>
.3	Feeding-stuffs for cats	664.71	MILLING OF WHEAT AND RYE. LARGE AND SMALL MILLS. COMPLETE INSTALLATIONS (FLOUR MILLS)
.5	Feeding-stuffs for birds	Special auxiliary subdivisions for 664.71	
664.68	MANUFACTURE AND TREATMENT OF BISCUITS, WAFERS, PASTRIES, CAKES, PUDDINGS	664.71-11	Wheat
.681	Biscuits. Wafers. Crackers etc.	-12	Rye
.016.3	Physical properties. Crispness	.71.05	Milling machinery in general
.1	Biscuits in general	Principal divisions (continued)	
.14	Plain biscuits	664.713	Blending, selection for milling
.15	Fancy biscuits	.715	Properties and structure of grain in relation to milling
.2	Waffles. Wafers	.016.8	Technological properties of grain. Milling quality. Millability
.6	Crackers. Matzos	.717	General principles of milling. Comparison of milling processes <i>Further particulars may be denoted by common auxiliaries, e.g.</i> <i>664.717(084.29) Milling flow sheets</i> <i>.717.001.5 Milling experiments</i>
.9	Other kinds	664.72	STORAGE, CLEANING AND CONDITIONING
.682	Dry flour confectionery products and pastries	.723	Cleaning before storage. Aspiration. Drying
.1	Products from puff-pastry	.724	Storage of grain <i>For storage in silos — 631.563.5</i> <i>For storage of milling products — 664.76.03</i>
.4	Sweet pastries	.726	Final cleaning (just before milling)
.5	Non-sweet pastries. Salted pastries. Cheese pastries	.1	Aspiration
.9	Other products	.2	Separation, removal of iron particles. Sorting.
.683	Fancy flour confectionery. Cakes. Fancy pastries	.4	Trieurs
.6	Oven-baked products from batter (not dry). Cakes	.5	Washing
.62	Plain cakes. Slab cakes —664.647.6 Cake flour. Prepared mixes	.7	Damping. Moistening. Conditioning.
.63	Layer cakes. Swiss rolls etc.	.9	Treatment with steam and hot water
.64	Small cakes and fancy pastries. Petits fours etc.	.727	Scouring. Brushing
.7	Fried products from dough or batter.	.729	Other cleaning operations
.9	Pancakes. Doughnuts etc.	664.73	Special chemical and physical treatment of grain. Bleaching of whole grain. Sterilization
.684	Filled bakery products. Pies. Tarts. Pasties	GRINDING OF GRAIN	Other methods of pretreatment
.4	Bakery products with fruit fillings. Fruit pies etc.	Special auxiliary subdivision for 664.73	
.5	Bakery products with other sweet fillings. Almond cakes etc.	664.73.05	Grinding machinery <i>For details of grinding equipment - 621.927</i>
.6	Bakery products with savoury fillings. Sausage rolls etc.	Principal divisions (continued)	
.685	Special baked products without flour <i>For sugar confectionery — 664.14</i>	664.731	Primitive grinding methods. Pestle and mortar. Hand mills with stone discs or rolls
.2	Cachets. Altar bread. Communion wafers etc.	.732	Grinding with stones and discs. Millstones
.4	Products from almond paste, coconut paste etc.	.1	Ordinary millstones
.6	Meringues	.2	Artificial millstones
.686	Puddings and their ingredients —641.856 Sweets. Puddings. Ices	.22	Porcelain millstones
.689	Other products	.4	Metal grinding discs
664.69	CEREAL PASTE PRODUCTS. PASTA. PROCESSED CEREALS	.6	Conical grinders
.691/.694	Cereal paste products. Pasta	.733	Grinding with rollers. Roller mills. Cylindrical crushers, converters and reducers
.691	Raw materials	.1	Roller mills with metal rollers, smooth or fluted
.692	Manufacturing processes	.2	Roller mills with porcelain rollers
.1	Mixing	.734	Comminution by pounding, stamping etc.
.3	Kneading	.1	Hammer mills
.5	Pressing	.2	Hammer mills with revolving hammers
.7	Drying	.736	Other grinding devices <i>664.736 ≈ 621.926</i>
.694	Pasta products. Macaroni. Spaghetti. Vermicelli. Noodles etc.	.738	Deflaking devices (detachers)
.696	Ready-to-serve cereal foods. Breakfast cereals —664.78 Technology of cereals other than wheat and rye	.739	Other devices
.1	Flaked cereals		

664.74	SIFTING, GRADING AND PURIFICATION OF MILLING PRODUCTS. OTHER FLOUR MILLING OPERATIONS	664.782.4	Modern milling processes
.741	Sifting (sieving, bolting) the product	.42	Scalping. Cleaning. Drying. Pretreatment
.1	Primitive sifting devices. Bolting sieves etc.	.43	Shelling. Husking
.2	Plansifting	.44	Separation. Monitors. Paddy machines
.3	Separation by cylindrical separators	.45	Hulling. Scouring. Pearling. Milling
.6	Centrifugal separation	.46	Polishing. Tamping. Finishing
.8	Pneumatic separation	.47	Grading
.742	Grading the product with screens and sieves	.48	Aftertreatment. Oiling. Coating
.2	Numbers and sizes of gauzes and bolting cloths	.6	Grinding
.3	Kinds of gauze and silk	.7	Other treatment of rice. Parboiling.
.4	Wire gauzes, e.g. of steel or brass	.8	Conversion process. Precooking. Malek process
.5	Perforated plate	.86	Rice products. Rice flour. Milled rice.
.743	Grading and purification of semolina	.784	Parboiled rice. Precooked rice
.1	Old processing methods	.2	By-products of rice milling. Animal feeding-stuffs
.2	Purification of semolina	.3	Processing of maize (milling of corn)
.8	Other grading and purification processes		—664.25 Maize starch (corn starch)
.744	Ancillary equipment and machinery		Early processes for maize milling
	<i>Further particulars may be denoted by colon combination with the subdivisions of 621</i>	.6	Modern processes for maize milling.
.746	Treatment of flour to improve baking quality and colour	.8	Production of grits and meal. Cleaning. Heat treatment or conditioning. Degermination.
.1	Effect of flour improvers	.86	Grading. Aspiration. Grinding. Bolting
.2	Processes according to the state of the chemical used	.785	Other processes
.22	Solid state	.3	Maize products
.23	Liquid state, e.g. Humphries process	.4	Maize by-products. Animal feeding-stuffs
.24	Gaseous state	.6	Milling of oats
.5	Processes according to the chemical used	.8	Production of oat flakes. Cleaning. Grading.
.51	Peroxides, e.g. benzoyl peroxide	.86	Sizing. Drying. Hulling. Separation of hulls and groats. Rolling groats into flakes
.52	Per-salts, e.g. persulphates, perborates	.786	Grinding
.53	Bromates. Iodates	.3	Other processes
.54	Chlorine. Chlorine compounds	.4	Oat products. Rolled oats. Oatmeal
.541	Chlorine	.6	Oat by-products. Animal feeding-stuffs
.543	Chlorine dioxide	.788	Processing of barley
.546	Nitrogen trichloride		<i>For malting of barley — 663.43</i>
.549	Other chlorine compounds	.4	Pot and pearl barley production. Cleaning.
.56	Acids. Acid salts	.6	Bleaching. Separation. Hulling. Pearling.
.562	Ascorbic acid	.8	Aftertreatment etc.
.59	Other compounds	.86	Grinding
	<i>Further particulars may be denoted by colon combination with the subdivisions of 546 or 547</i>	.788	Other processes. Production of barley groats
.6	Flour improvement by physical methods		Barley products. Pot and pearl barley
.748	Treatment of milling products in other ways. Sterilization. Denaturation. Enrichment etc.		Barley by-products. Animal feeding-stuffs
	—664.64.022.39 Enrichment		Processing of other cereals and allied grains
664.76	PRODUCTS FROM MILLING AND CLEANING		Processing of sorghum (milo)
Special auxiliary subdivision for 664.76			Buckwheat milling
664.76.03	Storage of milling products		Processing of millet
Principal divisions (continued)		664.8/9	FOOD PRESERVATION TECHNIQUE
664.761	Flour	664.8	PRESERVATION OF ORGANIC SUBSTANCES IN GENERAL
.1	Degree of extraction	Special auxiliary subdivisions for 664.8	
	664.761.1 $\approx$ 664.641.11	664.8.022	PRETREATMENT AND PREPARATION OF RAW MATERIALS FOR FOOD PRESERVATION
.762	Semolina		664.8.022.1/4 $\approx$ 66.022.1/4, e.g.
	—664.743 Grading and purification of semolina	.6	664.8.022.3 Pretreatment with preservatives and other additives
.764	Bran	.7	Pretreatment and preparation of raw foodstuffs
.765	Germ		664.8.022.6 $\approx$ 641.51
	<i>For cereal oils including wheat germ oil — 665.333.3/.5</i>		Culinary treatment, cooking of prepared foodstuffs for preservation
.768	Offals	664.8.03	664.8.022.7 $\approx$ 641.52
.769	Other products	.031	PRESERVATION AND STORAGE
664.78	TECHNOLOGY OF CEREALS OTHER THAN WHEAT AND RYE	.032	Preservation in pits, silos. Preservation in open vessels
Special auxiliary subdivisions for 664.78		.033	Preservation in closed vessels. Enclosed stores, lofts
664.78.01	General principles	.034	Preservation in a vacuum
.03	Storage. Preservation	.1	Preservation by smoking
Principal divisions (continued)		.2	Hot smoking
664.782	Processing of rice	.035	Cold smoking
.2	Primitive methods. Manual devices	.1	Preservation by chemicals
.22	Scalding of rice		Preservation by gases