CARAMEL COLOURS

FROM SUGAR TO SHADE: THE STORY BEHIND THE COLOUR

Nigay

TH.GEYER

INTRODUCTION

What's the sense of this brochure

It begins with sugar – simple, familiar and sweet. Through heat, time and precision, it transforms into something far more complex: caramel colour. From the golden glow of soft drinks to the deep richness of sauces and baked goods, caramel colour is almost everywhere.

This brochure takes you behind the scenes of that transformation, revealing the story that turn a basic ingredient into a versatile colouring agent used across industries. Explore the shades, the products and the possibilities that lie within every drop. By supplying even small quantities, we assist with new product developments and creative, individual projects.

TH. GEYER INGREDIENTS

Th. Geyer was founded in 1892 as a commercial company selling chemicals and has a history spanning over more than 130 years. As a globally active, medium-sized company, Th. Geyer Ingredients is engaged in the distribution of high-quality raw materials and additives for the food, beverage, pharmaceutical and cosmetic industries.

Our attractive portfolio offers you an extensive selection of innovative products in the best quality. We supply you with the products of global players – quickly, flexibly and also in smaller packaging units. You can benefit from the knowledge, expertise and quality of the world market leaders.

OUR PRODUCT PORTFOLIO FOR FOOD AND BEVERAGES

- Caramel specialties
- Burnt Sugars
- Caramel colours
- Flavours
- Extracts, distillates
- Raw materials, emulsions, syrups
- Fruit powders
- Extrudates, protein flours, fats and fat powders
- Preparations for the meat industry
- Vegetable oils and flours in organic and conventional quality
- Fruit and vegetable juice concentrates
- Colouring foods and natural colours

SALES PARTNER OF NIGAY

Nigay is a family-run company in the 6th generation and a world-renowned manufacturer of caramel. The French company, based near Lyon, is an expert in the science of caramelization and specialized in the production of caramel in various forms. Aromatic caramels, caramel colours, Burnt Sugars as well as caramel specialities like flakes or fillings count among their portfolio.

As an exclusive sales partner of Nigay, we offer an attractive portfolio of caramels for various applications in specific countries..

PREMIUM CARAMEL SELECTION

The Premium Caramel Selection is an exclusive range of caramels offering a wide variety of uses – chocolate, baked goods, ice cream, dairy and cereals as well as soft drinks. In addition to the standard caramels, we can also offer organic, Fairtrade and vegan qualities. The attractive selection of these proven quality products allows you to take the first step towards the successful development of your own products. A variety of different forms and concentrations satisfy both individual market demands as well as the technical requirements prevalent in the various individual areas of application.

Want more? – Discover additional flavours in our 'Premium Caramel Selection'.

Please find more information about Th. Geyer Ingredients and our product portfolio on **www.thgeyer.com**

CARAMEL COLOURS – ALL SHADES OF BROWN

Caramel colours are dark brown liquid or solid additives which are soluble in water. They are gained by the controlled heat treatment of food sugars, with or without chemical compounds, which promote the caramelization. Caramel colours give foods and drinks a colour that ranges from light yellow to dark brown, depending on the type of caramel used and the dosage.

CLASSES OF CARAMELS

There are four categories of caramel colours, called 'classes'. These classes correspond to the different 'E numbers' that can be used on food labels in Europe: E 150 a to d. They are named after the reaction accelerator being used for the caramelization.

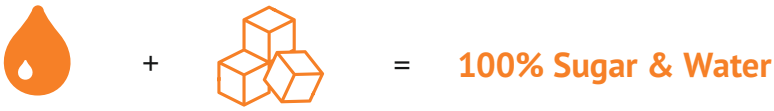
E150a: plain caramel
E150b: caustic sulphite caramel
E150c: ammonia caramel
E150d: sulphite ammonia caramel

	E150a	E150b	E150c	E150d
Shade of colour	Brown/Red	Brown/Yellow/Orange	Brown/Black	Brown/Grey
Sulphite compounds	No	Yes	No	Yes
Ammonium compounds	No	No	Yes	Yes
Characteristic caramelization promoter	Soda / or any	Soda sulphite	Ammonia	Ammonium sulphite
Colloidal charge	Weak	Negative	Positive	Negative
Stability: **- Alcohol** **- Tannin** **- Acid**	 + - -	 + + +/-	 - - +	 - + +
Main uses	Brandies Coffee extracts Speciality breads	Alcoholic beverages Aromatic extracts Energy drinks	Beers Malt vinegar Sauces Broth and meat	Soft drinks BBQ Sauces

LABELLING

According to the EU Regulation 1169/2011 on the provision of food information to consumers (Annex VII, Part C), food additives like caramel colours must be mentioned in the list of ingredients with the names of the categories to which they belong (here: 'colour') followed by their specific names or E numbers (here: E 150 a, b, c or d).

BURNT SUGARS - ONLY SUGAR AND WATER



Burnt Sugars are light brown to dark brown **liquids** or **solids** which can provide both taste and colour. These caramels are obtained exclusively by the controlled heat treatment of food sugars - without any chemical promoters. Therefore, they can be considered as natural ingredients.

Other terms historically used to describe this product include 'Caramelized Sugar', 'Caramelized Syrup', or 'Aromatic Sugar'. Burnt Sugars are sold under other denominations in various countries, for example in Germany: Karamellzuckersirup.

POSITIVE CHARACTERISTICS

- no salts, no alkaline compounds, zero chemicals
- consumer friendly due to clean labelling
- gluten free
- 4-MEI free
- THI free

APPLICATIONS

- Beers & ciders
- Ice creams
- Soft drinks and energy drinks
- Special breads
- Sauces
- Pet food

COLOURING POWER

3 000 – 20 000 EBC

LABELLING

Burnt Sugars can bring both taste and colour to the finished product. The appropriate labelling depends on the main use of the caramel and can only be determined by the manufacturer of the finished product.

- If the Burnt Sugar adds a discernible taste, it can be declared as an ingredient. The labelling then is: 'caramel (sugar, water)'
- If the Burnt Sugar brings only colour, it must be labelled as an additive: 'colour: E150a'

Further information at:
https://euteca.org/wp-content/uploads/2020-Revised-decision-tree-adopted-at-2017-AGM.pdf

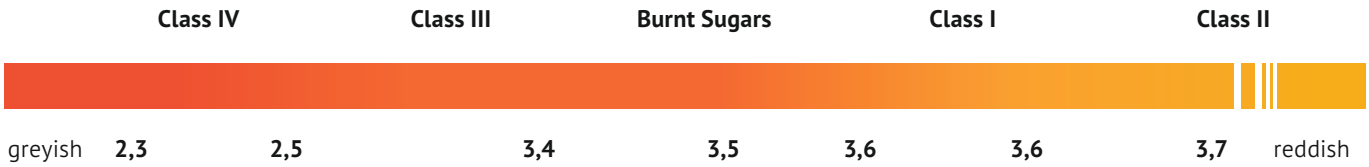
The purpose of this decision-tree is to distinguish the food additive colour 'plain caramel' (E150a) and aromatic foodstuffs (Burnt Sugars) by a simple yes/no decision cascade. The tree should increase legal certainty regarding that decision for the manufacturer of the material and for those food producers, who use the material primarily as an ingredient to colour (food colour additive) or to give primarily taste to a certain composed food.

ETHICAL PRECEPT:

Th. Geyer Ingredients has always strongly advised its customers not to mislead the final consumer. Faced with the actual enthusiasm for 'clean labelling' ingredients, transparency and clear information about Burnt Sugars is a major preoccupation for our company.

SUMMARY

Caramel Colours	Burnt Sugars
Food sweeteners with or without chemical compounds	Water and sugar only (without chemical promoters)
Labelling as E number or with real name	Clean labelling possible
Mainly used to add or intensify brown colour	Bring both taste and colour
Liquid or powder	Liquid or powder



EBC = European Brewery Convention

INGREDIENTS

Carbohydrates (commercially available food grade nutritive sweeteners which are the monomers glucose and fructose and/or polymers thereof, e.g. glucose syrup, sucrose and/or invert syrups and dextrose).

REACTANT

Different reactants to promote caramelisation and obtain different colours and stability.

NON REACTANT

Different reactant for the production of certain class I caramels (E150a)

CARAMELISATION

Controlled heat treatment of carbohydrates.

COOLING FILTRATION PROCESS

PACKING

SHIPPING

FOOD AND DRINK MANUFACTURERS

Quelle: https://euteca.org/caramel-colour/#safeuse

Product code	Product name	Liquid/ powder	EBC	Dry matter	Allergens	Kosher/ halal	Stability in			Shelf life in months
							Alcohol (Ethanol)	Alcohol vinegar	Beer	
BURNT SUGARS										
NG602137	C 22	Liquid	4 800	70%	No	Yes/Yes	Up to 75% ABV	+	-	24
NG600464	CP 5000	Liquid	4 800	70%	No	Yes/Yes	Up to 65% ABV	+	n.a.	24
NG600471	CPN 395	Liquid	6 000	69%	No	Yes/Yes	Up to 75% ABV	n.a.	+	24
NG600476	CPN 6000	Liquid	6 000	69%	No	Yes/Yes	Up to 75% ABV	+	+	24
NG600482	CPN 75	Liquid	7 600	69%	No	Yes/Yes	Up to 75% ABV	+	+	24
NG600457	CP 11000	Liquid	11 000	67%	No	Yes/Yes	Up to 75% ABV	+	n.a.	24
NG601076	SLB 129	Liquid	11 000	63%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG601129	SLB 725	Liquid	13 000	71%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG601117	SLB 16000 S	Liquid	14 000	69%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG601098	SLB 16000	Liquid	15 000	69%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG602012	CSR 15	Liquid	15 000	70%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG601136	SLB 725 S	Liquid	15 000	71%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG602901	SLBO 750	Liquid	15 000	67%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG602577	SLB 27 U	Liquid	17 000	70%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG601183	SLN 56	Liquid	17 000	69%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG601165	SLBO 18000	Liquid	18 500	66%	No	Yes/Yes	Up to 65% ABV	-	-	24
NG603801	GRP	Powder	17 000	95%	No	Yes/Yes	n.a.	n.a.	n.a.	24
NG600133	WO 170	Powder	17 000	97%	No	Yes/Yes	n.a.	n.a.	n.a.	36
NG603298	WS 100	Powder	20 000	98%	No	Yes/Yes	n.a.	n.a.	n.a.	24
ORGANIC BURNT SUGARS										
NG600467	CPA 3000	Liquid	3 000	72%	No	Yes/Yes	n.a.	n.a.	n.a.	24
NG601071	SLB 11000 FAIRTRADE	Liquid	11 000	72%	No	Yes/Yes	n.a.	n.a.	n.a.	24
NG605293	SLBA 197	Liquid	12 000	72%	No	Yes/Yes	n.a.	n.a.	n.a.	24
NG604860	WB 100	Powder	21 000	> 97.5%	No	Yes/Yes	n.a.	n.a.	n.a.	24

Product code	Product name	Liquid/ powder	EBC	Dry matter	Allergens	Kosher/ halal	Stability in			Shelf life in months
							Alcohol (Ethanol)	Alcohol vinegar	Beer	
CARAMEL COLOURS										
E150A										
NG600080	TS	Liquid	13 000	68%	No	Yes/Yes	Up to 75% ABV	-	-	24
NG604368	MWA	Liquid	16 000	68%	No	Yes/Yes	Up to 75% ABV	-	-	12
NG601259	TA	Liquid	17 000	70%	No	Yes/Yes	Up to 75% ABV	-	-	24
NG604060	SWA	Liquid	21 000	61%	No	Yes/Yes	Up to 45% ABV	+	-	24
E150B										
NG600074	TRB	Liquid	14 000	68%	Sulphites	Yes/Yes	Up to 75% ABV	n.a.	-	24
NG601318	TPS	Liquid	17 000	70%	Sulphites	Yes/Yes	Up to 75% ABV	+	-	24
NG600755	JVC	Liquid	19 000	68%	Sulphites	Yes/Yes	Up to 65% ABV	+	-	24
E150C										
NG602596	TMFC	Liquid	19 900	69%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG601233	SUCROMALT	Liquid	21 000	64%	Gluten	Yes/Yes	Up to 10% ABV	+	+	24
NG600439	CBS	Liquid	22 000	64%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG604541	LFL	Liquid	28 000	54%	No	No/No	Up to 10% ABV	+	+	24
NG600063	TMF	Liquid	33 000	69%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG600717	FSC	Liquid	33 800	69%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG602640	LFHC	Liquid	34 000	61%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG600785	LFC	Liquid	35 000	63%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG601275	TM	Liquid	36 000	70%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG600802	LFF 40	Liquid	38 200	68%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG603804	LFY	Liquid	42 000	68%	No	Yes/Yes	Up to 10% ABV	+	+	24
NG600107	WL 5	Powder	27 000	> 95%	No	Yes/Yes	Up to 10% ABV	+	+	36
NG602078	WMB 3	Powder	47 000	> 95%	No	Yes/Yes	Up to 10% ABV	+	n.a.	36
E150D										
NG602771	GMX	Liquid	25 000	55%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24
NG600735	GMDS	Liquid	27 000	69%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24
NG605244	49 PAS	Liquid	39 000	57%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24
NG600848	NDG	Liquid	39 000	57%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24
NG600903	NMA	Liquid	48 000	53%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24
NG600832	MDT	Liquid	50 000	50%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24
NG600872	NDM	Liquid	50 000	52%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24
NG601215	SMT	Liquid	50 000	55%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24
NG600144	WSM	Powder	95 000	> 95%	Sulphites	Yes/Yes	Up to 20% ABV	n.a.	-	24

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