



# Colouring



Aqueous solution of Leiber-Asada DC, LS

The current clean label trend in the food processing industry demands substituting food ingredients with an E-number for natural, E-number-free alternatives. This also affects the application of colourants. The colourant "Caramel" (E 150) is used in numerous food applications to generate a brown colour.

"Caramel" is produced by applying a thermal treatment to a mixture of sugar, acids, carbonate and other additives. The resulting brownish colourant is seen as a food additive and has to be labelled with an E-number.

Leiber's yeast extract portfolio comprises several brownish to dark brown yeast extracts that show excellent colouring effects with different intensities depending on the dosage. These colouring extracts are seen as natural, E-number-free foodstuffs. Our Asada-type extract can particularly replace E 150-Caramel as an E-number-free alternative.

## Leiber's functional colouring solution...

This product is available as free-flowing, agglomerated powder as well as a paste with 70 % dry matter. Several advantages compared to E 150-Caramel are evident:

- ◆ No colour fading during storage
- ◆ Neutral taste profile
- ◆ Attractive colouring effects
- ◆ pH stable colouring

## Applications:

- ◆ Meat products
- ◆ Sauces, seasonings and gravies
- ◆ Snacks and bakery products
- ◆ Unfiltered beverages
- ◆ Texturised vegetable proteins (TVP)
- ◆ Suitable for vegetarian applications

## Benefits:

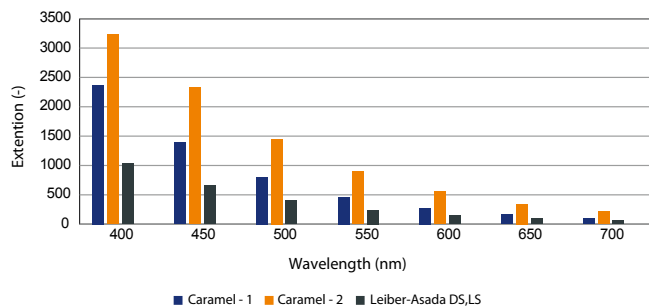
- ◆ Colourant alternative to "Caramel"
- ◆ Different application forms (powder or paste)
- ◆ Simple dosage
- ◆ Clean label
- ◆ Gluten-free according to EU regulation 828/2014
- ◆ Kosher and Halal
- ◆ GMO free

Product code	Product name	Consistency	Salt on d.m.
101469	Leiber-Asada DC, LS	Powder	< 3 %

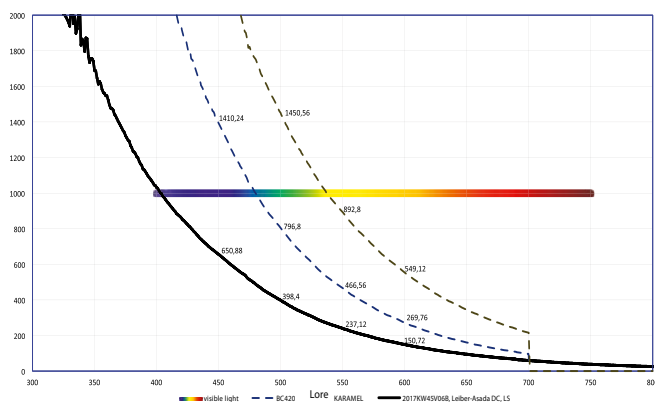




The specially developed Leiber-Asada DC, LS to be used as a “natural replacement” for Caramel colour has a very mild, neutral taste and a very intense typical brown colour. This product is a declaration friendly alternative for various applications where today Caramel colour still is used. The stability of the colour is as important as the colour shade itself. The typical product characteristics as well as the stability of Leiber-Asada DC, LS under certain conditions are shown below:



### Wavelength of Leiber-Asada DC, LS:



### Stability tests in various solutions:

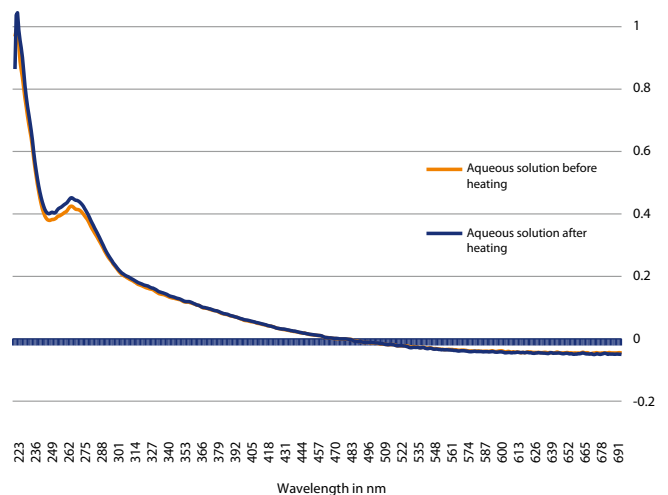
- ◆ Aqueous solution
- ◆ 20 % and 40 % ethanolic solution
- ◆ 20 % aqueous salt solution
- ◆ pH stability (pH range 1.5 – 14) in aqueous solutions

All solutions were prepared with 0.10 % and 0.22 % Leiber-Asada DC, LS stored at room temperature and day light for 14 days. No colour fading could be observed after these two weeks.

Additionally we tested Leiber-Asada DC, LS under the following process conditions:

- ◆ Thermal stability (121 °C or 249.8 °F; 30 min) – retort conditions
- ◆ Freeze – Thaw – Stability (Freezing at -18 °C or -0.4 °F)

In an exemplary manner the wavelength curve of Leiber-Asada DC, LS before and after heat treatment for 30 min, at 121 °C (249.8 °F) is shown:



**Overall no changes in colour could be observed**

### Summary “colour stability” of Leiber-Asada DC, LS:

Stable in 20 % ethanolic solution	✓
Stable in 40 % ethanolic solution	✓
Stable in 20 % aqueous salt solution	✓
pH stable	✓
Stable under retort conditions	✓
Freeze - Thaw - Stable	✓