佛 山 立 达 尔 生 物 科 技 股 份 有 限 公 司
FOSHAN LEADER BIO-TECHNOLOGY CO., LTD.
Tel: +86-20-87244121-6042 www.leadergz.com

PRODUCT INFORMATION

NAME OF PRODUCT: Leader® XC 11（EGG PIGMENT TCX）

DESCRIPTION:

Appearance: Free-flowing yellow powder;

Feed additive which contains no less than 6.0g/kg Xanthophyll and 5.0g/kg Canthaxanthin ;

Use as the yellow pigment for egg yolk, aquaculture, chicken skin and animal shank skin.

CHEMICAL PROPERTIES (specification):

Xanthophyll	0.6 %
Canthaxanthin	0.5 %
Calcium Carbonate (Carrier)	65-72 %
Silicon Dioxide (carrier)	22-25 %
Moisture	≤ 12 %
Antioxidant (BHT)	4 g/kg
Heavy metal(Pb)	0-0.002 g/kg

DIRECTION FOR USE:

For carcass color and shank skin:500-3000g/t;

For hen's egg yolk: 500-1500g/t;

For aquaculture:500-3000g/t.

PAGKAGING: 25 kg, aluminum foil bag with vacuum packing inside, double layer woven bag outside.

SHELF LIFE/ STORAGE: 24 months with original packaging under 18℃, using up ASAP after opening.

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METHOD OF ANALYSIS OF XANTHOPHYLL IN *LEADER® XC 11*

1. Sample preparation:

Weight 0.05g of *Leader XC 11* into 100ml amber volumetric flask, pipet 30ml of extraction(Hexane-Acetone-Absolute Alcohol-Toluene),swirl for 1 min ± 5secs.;Pipet 2ml of 40% methanolic-koh into flask and swirl for 1 min ± 5secs.;Attach air condenser and place flask into 56℃±1℃ water bath for 20 mins, then remove flask from bath and stand in dark for 1 h r± 5mins for cooling; Pipet 30ml Hexane into flask and swirl for 1min ± 5secs. Dilute to volume with 10% Na_2SO_4(Sodium Sulphate), shake vigorously for 1 min ± 5secs and stand in dark for 1 hr before chromatography, upper phase is 50 ml.

2. Column preparation and chromatography:

Connect the column on vacuum apparatus, weight 0.005g of absorbent cotton, place absorbent cotton into column and plug it at bottom, weight about 3g of absorbent II[Absorbent should be dried overnight in the oven(102 ± 5℃)before use and the dried absorbent should be kept in a dessicator; Apply vacuum and fill column with absorbent II, tap the side of column while loading, then use glass rod to press and flatten the surface of the absorbent. Weight about 3g of anhydrous Na_2SO_4 and lay it on top of absorbent layer, this is to absorb moisture in sample during chromatography. Cover the outside of column from the bottom to the anhydrous Na_2SO_4 with aluminum foil to protect the pigment from light. Pipet 10ml of the upper phase into the column, adjust the vacuum to allow 2-3 drops to flow per second; Add carotene eluent to the column as the last of the upper phase enters the absorbent (Important: keep absorbent covered with solvent at all times).

3. Spectrophotometer reading:

Then xanthophyll pigment in absorbent, replace flask with 100ml amber volumetric flask; Elute the xanthophyll with total xanthophyll eluent until no color band remains in the column; Dilute the volumetric flask to volume with total xanthophyll eluent. Stopper and invert flask several times and determine absorbance at A_{474}nm immediately to avoid isometrization and autoxidation losses; Blank the instrument with total xanthophyll eluent, rinsing about 4 times.

After the blank, wash the cuvette 4 times with the sample solution. Read absorbance at A_{474}nm.[The working standard solution should be determine using (Acetone-Isopranol) solution as blank]

4. Calculation:

Sudan I standard solution:

Stock solution (1.0 mM)

Working solution (0.04mM)

F=instrumental deviation factor= $\frac{0.561}{A_{474}(\text{working standard solution})}$

Xanthophyll(g/kg)= $\frac{A_{474} \times f \times 2.1205}{\text{Weight of sample (g)}}$

[The test complies with GB/13078 (Animal Feed Hygiene Standard of the People's Republic of China)]