**iCheck Chroma 3**

**Product Information**

**iCheck Chroma 3** is a portable photometer for the quantitative determination of vitamin A in refined edible oils.

**HOW DOES IT WORK?**

iCheck consists of 2 parts: a ready-to-use reagent vial and a device. The sample is injected into the reagent vial where a reaction with vitamin A takes place. The vial is inserted into the device that measures concentration of vitamin A in the vial.

1. Injection
2. Reaction
3. Measurement

**BENEFITS**

- **Speed:** result in less than 5 minutes
- **Economy:** cost is only 10% of conventional lab. methods
- **Easy implementation:** only 1 day training required
- **Scalability:** no set up calibration required

**OUR SERVICES**

Free-of-charge customer tech support:

- Online demos and trainings (i.e. Skype)
- Instant support via WhatsApp: 0049 162 583 77 30
- Support with analysis, calculations, interpretation of standards, sampling protocols, technical consultations about the micronutrients

**On-site Training**

Feasibility testing for new matrices

**PRODUCT DETAILS**

**iCheck Chroma 3** measures vitamin A quantitatively and displays the results in mg RE/kg. iCheck devices come in a portable case with all necessary accessories.

**iCheck reagent vials** contain a patented mixture of reagents. They come in a box (Test Kit) sufficient for 100 analyses. The reagent’s shelf-life is 12 months at room temperature.

**iChecks are manufactured in Germany, used in over 80 countries and validated against standard laboratory methods. Learn more at www.bioanalyt.com/products**
iCheck Chroma 3

Technical Data

Quality assurance

iCheck and iCheck Chroma 3 reagent vials are produced according to quality management system (DIN EN ISO 9001:2015) certified by TÜV Nord in Germany. We guarantee that each vial contains the exact mixture of reagents safely sealed and crimped to ensure reliable results.

### TECHNICAL DATA

#### Sample

- **Analyte:** Vitamin A (retinol) as retinyl palmitate
- **Sample:** Refined edible oils: palm, soy, cottonseed, sunflower, corn, peanut, rapeseed, coconut, rice bran
- **Sample preparation:** If the oil is solid, warm it up to a maximum of 50°C to make it liquid
- **Sample volume per analysis:** 0.1 mL (100 µL)
- **Concentration range:** >3.0 ppm (mg/kg), samples above 30.0 ppm must be diluted in refined unfortified oil

#### Device

- **Analytical method:** Photometric determination of retinol concentration using colorimetric Carr-Price reaction combined with compensation for matrix effect
- **Units displayed:** mg RE/kg and IU/g; RE – retinol equivalents, IU – international units
- **Linear range:** 3.00 – 30.00 mg RE/kg (10.00 - 100.00 IU/g)
- **Calibration:** Factory set (standards included for control)
- **Time per analysis:** < 2 min
- **Environment:** 20 –30°C, no direct sunlight
- **Accuracy at 95% confidence interval at 25°C:** < ±30%
- **Method comparison:** High-performance liquid chromatography (HPLC)
- **User training:** 1 day training
- **Use:** Laboratory and field
- **Data output:** Sample #, Batch #, Result, Date, Time (in transferred data)
- **Connectivity and data:** Results are stored in the device and transferred to a PC via USB
- **Power source:** NiMH rechargeable batteries included; AA 1.2 or 1.5V
- **Warranty:** 2 years
- **Device weight:** 0.45 kg
- **Device dimensions:** 11 x 4 x 20 cm (W x H x L)

#### Test Kit

- **Content:** 100 reagent vials; 100 syringes - 1.0 mL; 100 needles - 0.8mm x 16mm.
- **Chemical composition:** Chloroform and antimony trichloride
- **Volume per reagent vial:** 2.0 mL
- **Shelf life:** 12 months at 20 –30°C, no direct sunlight, upright
- **Dimension of test kit:** 26 x 14.5 x 16.5 cm
- **Disposal instructions:** Hazardous waste
- **Optional equipment:** 50 mL falcons, reference samples