

designed for scientists

# LAB ESSENTIALS FOR AGRICULTURE INDUSTRY



#### **Magnetic Stirrer**

#### RET control-visc white

- > Acid digestion with an integrated pH measurement on a highly chemical resistant, ceramic-coated heating plate
- > Chemical synthesis of metal-based nanoparticles with a dual temperature sensor for precise tempering



#### Oven

#### IKA OVEN 125 control - dry

- > Sample preparation, timer function to prevent excessive drying which can change the nutrient content
- > Moisture content and dry matter analysis



#### Mills

#### MultiDrive basic M 20 Successor Package

- > Grind soil, fertilizer, and plant samples for further analysis (pesticide residue analysis, nutrient content analysis)
- > Grind samples with a hardness of up to 5 Mohs and with an optional tungsten carbide blade > 5 Mohs



#### **Rotary Evaporator** RV 8 V

- > Solvent separation, removal and recycling
- > Dry pesticide extracts under vacuum distillation for wastewater and ground water analysis



## **Temperature Control**

#### ICC control IB R RO 15 eco

- > Enzymatic digestion for raw fibre analysis and determination of fertiliser phosphate content with high temperature precision
- > Mercury contamination testing in water at 95 °C for up to 15 samples (with a stainless steel bath)



#### **Incubator Shaker** KS 3000 ic control

- > Extract nutrients, minerals and microorganisms from soil samples for analysis
- > Production of biofertilizers by fermentation with a temperature range of RT +5 to 80 °C

# IKA RECOMMENDATION

# /// For understanding and optimizing agriculture feed and waste



Complies to DIN EN ISO 9831, determination of the gross calorific value of animal feeding stuffs, animal products, and faeces or urine. To determine the physiological calorific value the energy content of the food is determined at first. The energy of the faeces and urine is simply subtracted from the same.





### APPLICATION

Low combustion efficiency

#### SOLUTION

Improved combustion results when using C 5 crucible as the combustion temperature is higher when using stainless steel material compared to quartz



#### C 15 Paraffin strips

#### APPLICATION

Difficulty in combusting hard, flammable and water-containing samples

#### SOLUTION

Add paraffin strips to these samples to increase the energy of the samples during combustion



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