# APPLICATIONS FOR OUR POLARIMETERS ACCORDING TO INDUSTRIES



#### PHARMACEUTICAL INDUSTRY

Typical applications:

- determination of the concentration of sugar as an ingredient of pharmaceutical agents
- purity control and content determination
- determination of the stereochemical composition and mutarotation
- characterisation of new synthetic substances

Analysed substances: sugar, amino acids and proteins, blood sera, vitamins, steroids, antibiotics, hormones, painkillers, amphetamines Special requirements: precision, compliance with standards

Standards: pharmacopoeias (USP, BP, JP, Ph. Eur.), GLP Recommended polarimeters: P8000-T, P8000-P

## CHEMICAL INDUSTRY

Typical applications:

- purity control and concentration determination
- monitoring of chemical processes during the production of optically active substances
- characterisation tests in research laboratories
- reaction kinetic analyses

Analysed substances:

biopolymers, synthetic polymers, glycerinaldehydes, various hydrocarbons etc. Special requirements: accurate temperature control at different temperatures, variability of the measurement methods, option of interval measurements Standards: AOAC, OIML, ASTM, GLP Recommended polarimeters: P8000-T, P8000-P

#### FOOD AND BEVERAGE INDUSTRY

Typical applications:

- characterisation, quality and purity control of raw materials and end products
- determination of the sugar concentration in beverages and candies
- routine analysis with high sample throughput

Analysed substances:

sugar, lactic acid, starch (polysaccharide) in food and feed, aromas, lactose in milk, glucose in wine, sugar composition in honey etc. Special requirements: fast measurement with easy handling, robust, acid-resistant measurement tubes Standards: AOAC, OIML, ASTM, GLP Recommended polarimeters: P8000-T, P8000-TF

#### SUGAR INDUSTRY

Typical applications:

- determination of the sugar concentration in raw materials, preliminary, intermediate and end products
- monitoring of chemical processes, e.g. during the manufacture of invert sugar
- purity control

Analysed substances: sugar cane, beet pulp, molasses, refined sugar, syrup, invert sugar etc. Special requirements: availability of the international sugar scale, no need for maintenance Standards: ICUMSA, GLP

Recommended polarimeters: P8000, P3000

#### MANUFACTURERS OF AROMAS, FRAGRANCES AND ESSENTIAL OILS

Typical applications:

- quality control of raw materials and additives
- monitoring of the production of intermediate and end products

Analysed substances: essential oils such as orange, lavender, lime and peppermint oil, glyceric acid, aromas and perfumes for the food and cosmetics industry etc. Special requirements: high resistance to chemicals, availability of micro-cuvettes Standards: Ph. Eur., AOAC, OIML, GLP Recommended polarimeter: P8000-TF

#### HOSPITALS AND PHARMACIES

Typical applications:

- incoming/outgoing goods inspection
- control of pharmaceutical products according to pharmacopoeias

Analysed substances: pharmaceutical agents as well as raw materials and additives

Special requirements: robustness, easy handling, low price

Standards: pharmacopoeias (USP, BP, JP, Ph. Eur.), GLP Recommended polarimeters: P1000-LED, P3000

### TRAINING IN THE INDUSTRY OR AT UNIVERSITIES

Use for practical exercises and experiments:

- kinetics of the cane sugar inversion
- mutarotation of glucose
- determination of the concentration of polysaccharides through amylolysis

Special requirements: easy handling, low price

Standard: GLP Recommended polarimeters: P1000-LED, P3000 Version 3.0 | Status: October 2016 | Subject to modifications and errors



Phone Fax

+49 40 514317-0 +49 40 514317-60 E-mail Web info@kruess.com www.kruess.com



