



SYNTHdetect



Overview

SYNTHdetect is a desktop diamond verification instrument for loose and mounted stones, designed to separate diamonds from synthetic diamonds. SYNTHdetect is manually operated and requires an operator to interpret the test results.

SYNTHdetect captures images and based on visual analysis of the images the instrument automatically displays one of the following results that can be interpreted by the operator:

- i) Natural
- ii) Refer

The 'Refer result could contain potential synthetic diamonds, diamonds and diamond simulants. These referrals should be tested further for full verification. The instrument does not require user interpretation although it contains the software to aid in this interpretation. SYNTHdetect needs to be calibrated periodically.

Stone Testing Capabilities

Weight range: **0.001 ct - 100 ct**
 Colour range: **D-J** failsafe across all colours although natural fancy colours will give a higher referral rate
 Stone shape: **All**
 Diamond simulants: **Yes**
 Mounted stones: **Yes** not yet ASSURE tested

Instrument Capabilities

Automated feed: **No**
 Automated results: **No**
 Automated dispense: **No**
 Detect or Refer (synthetic diamonds): **Refer**
 Detect or Refer (diamond simulants): **Refer**
 Multiple stones at once: **Yes**
 Training required: **Yes**

Instrument Performance

The results demonstrate the performance of the SYNTHdetect tested by a novice operator:

	Core Sample
Diamond False Positive Rate <i>Optimal rate 0%</i>	0.0%
Diamond Referral Rate <i>Optimal rate 0%</i>	1.4%
Diamond Accuracy Rate <i>Optimal rate 100%</i>	98.6%
Speed <i>Stones tested per hour</i>	583

Instrument Specifications

 31 cm (W) x 34 cm (D) x 45.8 cm (H)

 30 kg

Price: 18,500 USD July 2019

Contact

debeersgroupservices.com/instruments
contact@debeersgroupservices.com
 +44 207 858 7887

ASSURE Tested March 2019
ASSURE ID 375648