

**PROJECT ASSURE
DIAMOND VERIFICATION INSTRUMENT STANDARD REPORT**

Summary Report for: IIDGR / IIDGR / DiamondView™

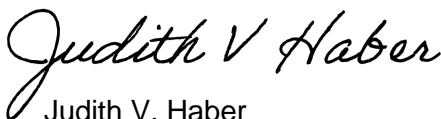


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Received Date: September 12, 2018
Invid Number: 671336
Assessment Dates: January 28, 2019 through February 4, 2019
Testing ID Number: 1817169S-C*
Assessment Testing ID: 1817169
Report Issue Date: March 1, 2019

*This report supersedes test report dated February 28, 2019. The report has been amended to include the definitions for each category per the DPA's request.

Approval By:



Judith V. Haber
Global Technical Lead Chemistry

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	IIDGR, DiamondView™		
	Date:	March 1, 2019	Testing ID:

Manufacturer's Name: IIDGR
Instrument Model: NA
Serial Number: 488
Software Version: 1.1.0.4
Lab Manager: Winson Wong
Analyst/Operator: Lawrence Scialdone, Anthony Tedeschi

Overview

The stated instrument was evaluated to Diamond Verification Instrument Standard Part 1 – Diamond Verification Instrument for Screening Diamonds from Synthetic Diamonds (30 January 2019) as referenced in sections 7.3 and 7.4 of the Diamond Verification Instrument Standard – General Requirements for Evaluation Diamond Verification Instruments 30 January 2019).


Manufacturer's Claims for Instrument Capability

Sample Composition	
Type of Stones	Diamonds and Synthetic diamonds
Stone Size Range	1.3 to 14.4 mm (0.010 to 10 ct.)
Stone Color Range	D to J
Loose / Mounted	Loose and Mounted (Limited)
Single / Batch Stone Testing	Single Stone Testing
Automated / Manual Feed	Manual Feed

Summary of Assessment

The instrument has been verified to be able to screen loose and mounted round, brilliant cut diamonds, synthetic diamonds and simulant in the size range of 1.3 to 3.7 mm (0.010 to 0.2 ct.) and D to J color range.

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Results of Performance Testing to the Diamond Verification Instrument Standard

Test Stone Sets used to Assess Performance

Loose, Polished Stone Test Sets	Diamond	Synthetic Diamond	Diamond Simulant
Primary Set (>2.00 mm, D-J colour) 748 diamonds, 150 synthetic diamonds and 148 diamond simulants	☒	☒	☐
Supp. Set A (>2.00 mm, D-J colour) 249 diamonds	☒		
Supp. Set AB (>2.00 mm, D-J colour) 50 synthetic diamonds, 47 diamond simulants		☒	☐

Results of instrument stone assessment testing of Primary and A&AB Combined - Expert

Test Property	Results for Loose, Polished Stone Test Sets
	Primary and A&AB Combined
Diamond accuracy (%)	100.0
Synthetic diamond accuracy (%)	100.0
Diamond referral rate (%)	na ^[1]
Synthetic diamond referral rate (%)	na ^[1]
Diamond false positive rate (%)	0.0
Synthetic diamond false positive rate (%)	0.0
Diamond false negative rate (%)	0.0
Synthetic diamond false negative rate (%)	0.0

Results of instrument stone assessment testing of Primary and A&AB Combined - Novice

Test Property	Results for Loose, Polished Stone Test Sets
	Primary and A&AB Combined
Diamond accuracy (%)	98.0
Synthetic diamond accuracy (%)	100.0
Diamond referral rate (%)	na ^[1]
Synthetic diamond referral rate (%)	na ^[1]
Diamond false positive rate (%)	0.0
Synthetic diamond false positive rate (%)	2.0
Diamond false negative rate (%)	2.0
Synthetic diamond false negative rate (%)	0.0

Notes:

na Not applicable per instrument manufacturer

[1] Does not apply because this instrument does not classify stones as 'Refer'

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Results of instrument testing speed assessment

Rate of Testing Speed Test Method	Average Test Result
<input type="checkbox"/> Test Method A: Fixed number of stones	112 stones per hour
<input checked="" type="checkbox"/> Test Method B: Fixed time frame	
<input type="checkbox"/> Test Method C: Reduced number of stones	

Results of instrument stone assessment testing of individual stone sets - Expert

Test Property	Results for Loose, Polished Stone Test Sets					
	Primary	A & AB	B & AB	C	D & DE	E & DE
Diamond accuracy (%)	100.0	100.0	na	na	na	na
Synthetic diamond accuracy (%)	100.0	100.0	na	na	na	na
Diamond referral rate (%)	na ^[1]	na ^[1]	na	na	na	na
Synthetic diamond referral rate (%)	na ^[1]	na ^[1]	na	na	na	na
Diamond false positive rate (%)	0.0	0.0	na	na	na	na
Synthetic diamond false positive rate (%)	0.0	0.0	na	na	na	na
Diamond false negative rate (%)	0.0	0.0	na	na	na	na
Synthetic diamond false negative rate (%)	0.0	0.0	na	na	na	na

Results of instrument stone assessment testing of individual stone sets - Novice

Test Property	Results for Loose, Polished Stone Test Sets					
	Primary	A & AB	B & AB	C	D & DE	E & DE
Diamond accuracy (%)	97.6	99.2	na	na	na	na
Synthetic diamond accuracy (%)	100.0	100.0	na	na	na	na
Diamond referral rate (%)	na ^[1]	na ^[1]	na	na	na	na
Synthetic diamond referral rate (%)	na ^[1]	na ^[1]	na	na	na	na
Diamond false positive rate (%)	0.0	0.0	na	na	na	na
Synthetic diamond false positive rate (%)	2.4	0.8	na	na	na	na
Diamond false negative rate (%)	2.4	0.8	na	na	na	na
Synthetic diamond false negative rate (%)	0.0	0.0	na	na	na	na

Notes:

na Not applicable per instrument manufacturer

[1] Does not apply because this instrument does not classify stones as 'Refer'

Additional Notes from Assessment Findings

Below is a summary of an additional findings from assessment:

- No additional comments

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Definitions

Diamond Accuracy	Defined as the fraction of test stones correctly classified by the specific diamond verification instrument as diamond.
Synthetic Diamond Accuracy	Defined as the fraction of test stones correctly classified by the specific diamond verification instrument as synthetic diamond.
Diamond Referral Rate	Defined as the fraction of diamonds that could not be classified by the specific diamond verification instrument and requires further.
Synthetic Diamond Referral Rate	Defined as the fraction of synthetic diamonds that could not be classified by the specific diamond verification instrument and requires further testing.
Diamond False Positive Rate	Defined as the fraction of synthetic diamonds incorrectly classified as diamond by the specific diamond verification instrument.
Synthetic Diamond False Positive Rate	Defined as the fraction of diamonds incorrectly classified as synthetic diamonds by the specific diamond verification instrument.
Diamond False Negative Rate	Defined as the fraction of diamonds incorrectly classified as synthetic diamond by the specific diamond verification instrument.
Synthetic Diamond False Negative Rate	Defined as the fraction of synthetic diamonds incorrectly classified as diamond by the specific diamond verification instrument.
Rate of Testing Speed	Defined as the average speed at which the diamond verification instrument evaluates unknown stones.

***** End of Report *****

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