

# PQ Protocol



Company: Moscow State University of  
Operator: Default  
Instrument Type: Senterra Microscope 785 nm Grating 400  
Optics Configuration: Microscope with: 785 nm, Grating 400, CCD  
Accessory: None  
Instrument Serial Number: Result  
Instrument Firmware Version: Result  
OPUS/DB Version: 20090227 / 6.5.9  
Overall Test Result: FAIL  
Test expires: Test failed  
Test Date/Time: 2012/01/18 18:30:47  
Test Spectra Path: C:\Program Files\OPUS\_65\Validation\Data\20120118\183047  
Comment:

## Wavelength Accuracy Test

1. Peak specified:	391.5 cm <sup>-1</sup>	1. Peak measured:	391.3 cm <sup>-1</sup>
Max. Deviation Limit:	3.00 cm <sup>-1</sup>	Measured Deviation:	0.24 cm <sup>-1</sup>
2. Peak specified:	857.9 cm <sup>-1</sup>	2. Peak measured:	857.9 cm <sup>-1</sup>
Max. Deviation Limit:	3.00 cm <sup>-1</sup>	Measured Deviation:	0.03 cm <sup>-1</sup>
3. Peak specified:	1168.5 cm <sup>-1</sup>	3. Peak measured:	1168.4 cm <sup>-1</sup>
Max. Deviation Limit:	3.00 cm <sup>-1</sup>	Measured Deviation:	0.07 cm <sup>-1</sup>
4. Peak specified:	1323.9 cm <sup>-1</sup>	4. Peak measured:	1324.2 cm <sup>-1</sup>
Max. Deviation Limit:	3.00 cm <sup>-1</sup>	Measured Deviation:	0.33 cm <sup>-1</sup>
5. Peak specified:	1648.4 cm <sup>-1</sup>	5. Peak measured:	1648.3 cm <sup>-1</sup>
Max. Deviation Limit:	3.00 cm <sup>-1</sup>	Measured Deviation:	0.08 cm <sup>-1</sup>
6. Peak specified:	2931.1 cm <sup>-1</sup>	6. Peak measured:	---
Max. Deviation Limit:	3.00 cm <sup>-1</sup>	Measured Deviation:	---

## Throughput Test

Throughput minimum requirement: 2700      Throughput measured: 6943

## Photometric Consistency Test

1. Peak specified:	620.9 cm <sup>-1</sup>	1. Peak measured:	620.5 cm <sup>-1</sup>
Max. Deviation Limit:	10.000 %	Measured Deviation:	14.760 %
2. Peak specified:	1001.4 cm <sup>-1</sup>	2. Peak measured:	1001.1 cm <sup>-1</sup>
Max. Deviation Limit:	10.000 %	Measured Deviation:	0.000 %
3. Peak specified:	1602.3 cm <sup>-1</sup>	3. Peak measured:	1602.0 cm <sup>-1</sup>
Max. Deviation Limit:	10.000 %	Measured Deviation:	22.666 %
4. Peak specified:	Not determined.	4. Peak measured:	Not determined.
Max. Deviation Limit:	---	Measured Deviation:	---
5. Peak specified:	Not determined.	5. Peak measured:	Not determined.
Max. Deviation Limit:	---	Measured Deviation:	---

# Overall Test Result = FAIL



Date and Signature

Date and Signature