



Technical Data

## Quantification of RNA using FAS-Digi PRO

Product

FastGene® FAS-Digi PRO Geldoc System (GP-07LED)

Purpose

RNA was quantified using the FastGene® FAS-Digi PRO (GP-07LED) equipped with a scientific grade DSLR camera.

Method

Human RNA was diluted in 9 steps. RNA was separated and detected in gel electrophoresis using the Mupid-One Electrophoresis Chamber (MU2) and the DNA stain MIDORI<sup>Green</sup> Xtra (MG10).

### Material & Method



FastGene®  
FAS-Digi PRO  
(GP-07LED)



MIDORI<sup>Green</sup> Xtra  
(MG10)



Mupid-One  
Electrophoresis System  
(MU2)



FastGene®  
Agarose  
(Cat No. AG02)

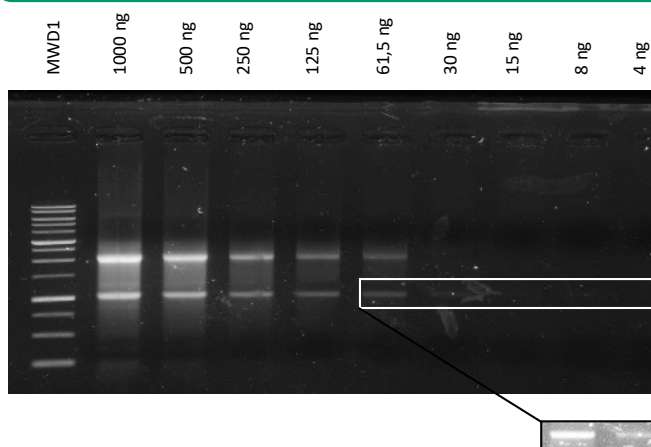
### Experimental procedure

A 1% agarose gel was stained by using 3  $\mu$ L of MG10 in 50 mL of liquid agarose. After setting, the gel was loaded with MWD1 (5  $\mu$ L), and human total RNA (Agilent cat no.: 750500) in different concentrations (1000, 500, 250, 125, 62.5, 30, 15, 8, 4 ng).

Electrophoresis chamber: Mupid-One (cat.no.: MU2)

Running condition: 100 V, 25 min

### Result



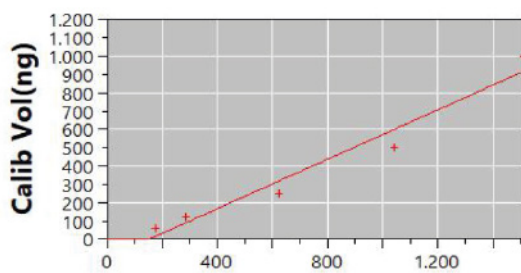
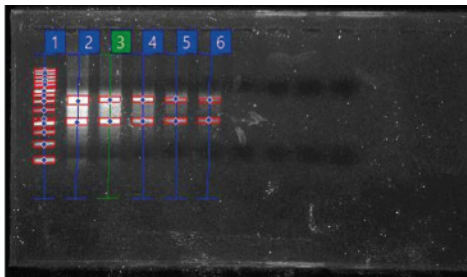
1% agarose gel. Stained with MIDORI<sup>Green</sup> Xtra and recorded with FAS-Digi PRO.

increased brightness for better visualization

## Calculated result

The results were quantified by using Total LAB 1D (GP-QS1).

### FAS-Digi Pro (GP-07LED)

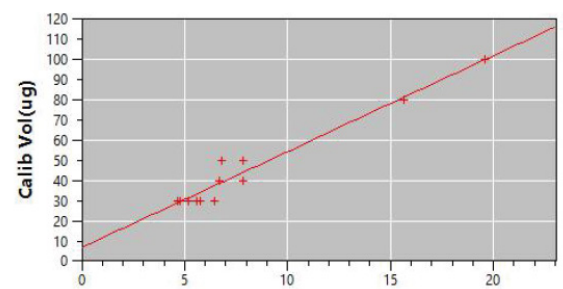
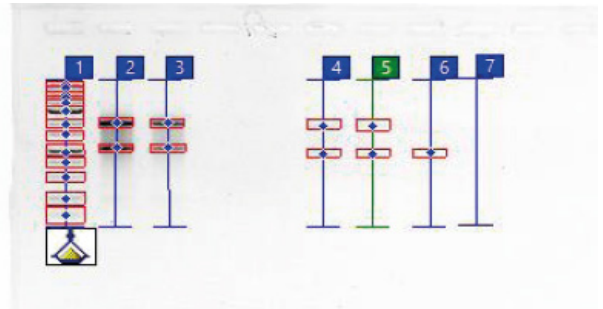


Linear fit  
 $y = 6,75E-004x - 103,2$   
 $R^2$  Value: 0,9567

Band Table

Lane	Band	Raw Volume	Entered Volume	Calculated Volume	Difference
2	1	1508550.67	1000.00	915.44	84.56
3	1	1041014.66	600.00	589.74	-99.74
4	1	623491.74	250.00	317.81	-67.81
5	1	284048.42	125.00	88.61	-36.39
6	1	176359.34	62.50	15.69	-46.61

### FAS-V (GP-FAS-V)



Linear fit  
 $y = 4,77E-006x + 6.639$   
 $R^2$  Value: 0.9555

Band Table

Lane	Band	Raw Volume	Entered Volume	Calculated Volume	Difference
1	1	5172544.00	30.00	31.29	-1.29
1	2	4797968.00	30.00	29.51	0.49
1	3	4681424.00	30.00	28.95	1.05
1	4	4686464.00	30.00	28.97	1.03
1	5	5577664.00	30.00	33.22	-3.22
1	6	19570416.00	100.00	99.91	0.09
1	7	6480336.00	30.00	37.52	-7.52
1	8	7849472.00	50.00	44.05	5.95
1	9	15637608.00	80.00	81.17	-1.17
1	10	6795952.00	50.00	39.03	10.97
1	11	5747536.00	30.00	34.03	-4.03
1	12	7834304.00	40.00	43.98	-3.98
1	13	6657952.00	40.00	38.37	1.63

## Summary

The CMOS Sensor of the Canon 200D scientific grade camera which is used in the FAS-Digi PRO is able to generate pictures, which can be quantified by using the Total LAB 1D software. The stain MIDORI<sup>Green</sup> Xtra shows a low background and crystal clear bands. This stain excels by a linear signal to noise ratio and is therefore suitable for quantification (see also Technical Note 2018\_06).