

**QuantDNA™ 50-15k**

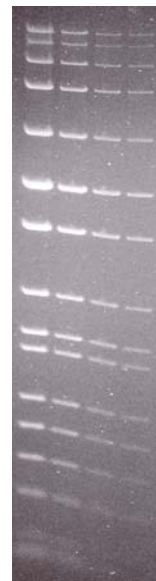
Cat #: 22011, 22012

Base pairs      Nanogram in each loading

bps	10ul	5ul	2ul	1ul
15k	40	20	8	4
10k	20	10	4	2
7k	50	25	10	5
5k	80	40	16	8
3k	100	50	20	10
2k	200	100	40	20
1.5k	150	75	30	15
1k	100	50	20	10
800	80	40	16	8
700	70	35	14	7
500	50	25	10	5
400	40	20	8	4
300	30	15	6	3
200	20	10	4	2
100	10	5	2	1
50	20	10	4	2

Actual loading volume in microliter (ul)

Volume: **10 5 2 1** (ul)



Gel size (length, width and thickness in mm): 220x110x8

Well size (length, width and depth in mm): 5x1x5

Agarose concentration: 1%

**FAQs about QuantDNA™50-15k DNA size and quantity standard**

*How much should it be loaded?*

Recommended loading for this DNA standard is 5 ul. However other volumes may be loaded depending on quantity of DNA sample to be determined. For large gel with big loading wells, 10 to 20 ul may be loaded. For mini gel with small wells, 1 to 2 ul may be loaded. Most agarose gel can detect 1 ng DNA band (Molecular Cloning, Sambrook et al). Under most electrophoretic conditions, all DNA bands in QuantDNA™50-15k DNA standard can be detected with EtBr staining by a regular digital camera even 2 ul is loaded. 50 and 100 bp bands may not be visible when 1 ul is loaded because of small DNA fragment diffusion.

*How accurate is the quantity determination?*

QuantDNA™50-15k DNA standard is prepared by CsCl double banding. Extensive affords have been made to ensure its quantity accuracy. If a UV reading gives different quantity than it is determined by our standards, our quantification is more accurate. This is simply because of contamination of DNA sample with impurities including but not limited to RNA.

*Can we use this standard on buffer-less gel?*

Yes. When you load this standard on a buffer-less gel, make sure you add some water in the same well to fill half of the well. Otherwise the DNA bands cannot be well separated.

*Can we use a density scanner to determine quantity with this standard?*

Of course. Make sure the gel is evenly stained when you compare different DNA bands on the gel. If the gel is not evenly stained or EtBr is running off the bottom of the gel, the quantity will not be accurate. Our standards may be used to calibrate a density scanner.

*Why are low or high molecular weight (MW) DNA bands sometimes not resolved or detectable?*

Above figures are prepared on a 22 centimeter 1% agarose gel. When smaller gels are used, only low percentage gels ( $\leq 0.8\%$ ) and high percentage gels ( $\geq 2\%$ ) will separate and detect high MW bands and low MW bands respectively.

The standard is stable at room temperature for 6 months. Please cut or fold on the lines for convenient posting or filing.