

Hoefer™ DQ 200

1

Prepare the assay and DNA standard solutions.
(See back.)

2

Zero the instrument.

Prepare an assay blank using 2 ml of the appropriate Assay Solution (A for low or B for high DNA concentration). Dry the sides of the cuvette with a low-lint tissue. Insert the cuvette into the well, close the lid, and press **<ZERO>**. After "0" is displayed, remove the cuvette.

3

Calibrate the instrument.

Deliver 2 µl of the appropriate DNA standard solution (low or high range) to 2 ml of Assay Solution in the cuvette. Mix by pipetting several times into a disposable transfer pipet. Place cuvette in well, close the lid and press **<CALIB>**. Enter 100 for the low range assay, 1000 for the high range assay, or a convenient factor (see manual) and press **<ENTER>**. After the entered value is displayed, remove the cuvette.

4

Zero the instrument.

Empty and rinse the cuvette. Dry by draining cuvette and blotting upside down on a paper towel. Add 2 ml of the same Assay Solution used in step 2, insert the cuvette into the well, close the lid, and press **<ZERO>**. After "0" is displayed, remove the cuvette.

5

Measure the sample.

Add 2 µl of sample and mix well. Place the cuvette in the well, close the lid, and record the measurement displayed.

6

Measure subsequent samples. Repeat steps 4 and 5 for each sample.

Important!

- Turn instrument on and allow 15 minutes for the lamp to stabilize before taking measurements.
- This protocol is for the default "No Prompt" mode. See manual for use of "Prompt" mode.
- Accuracy in pipetting is critical for reproducible results. A pipetter accurate to 0.02 µl is recommended.
- Use and store the instrument away from brightly lit areas and away from areas where the instrument may become wet.
- Place instrument so that back vents are not obstructed.

The logo for Hoefer, featuring a stylized 'H' symbol composed of three overlapping, slightly curved lines, followed by the word 'Hoefer' in a bold, sans-serif font.

Low range (A)

(10 to 500 ng/ml final DNA concentration)

Assay Solution	<i>0.1 µg/ml H 33258 in 1X TNE (0.2 M NaCl, 10 mM Tris-Cl, 1 mM EDTA, pH 7.4)</i>	
	H 33258 stock solution	10.0 µl
	10X TNE buffer	10.0 ml
	Distilled filtered water	90.0 ml

DNA Standard	<i>1:10 dilution (100 µg/ml) of 1 mg/ml DNA standard stock solution. Mix:</i>	
	1 mg/ml DNA standard stock	100 µl
	10X TNE buffer	100 µl
	Distilled water	800 µl

High range (B)

(100 to 5000 ng/ml final DNA concentration)

Assay Solution	<i>1 µg/ml H 33258 in 1X TNE (0.2 M NaCl, 10 mM Tris-Cl, 1 mM EDTA, pH 7.4)</i>	
	H 33258 stock solution	100.0 µl
	10X TNE buffer	10.0 ml
	Distilled filtered water	90.0 ml

Undiluted DNA standard stock solution (1 mg/ml).

Hoechst dye stock solution

(10 ml, 1 mg/ml Hoechst H 33258)

Add 10 ml distilled water to 10 mg H 33258. Do not filter. Store at 4 °C for up to 6 months in an amber bottle.

10X TNE buffer

(1000 ml, buffer stock solution)

12.11 g	Tris	100 mM
3.72 g	EDTA Na ₂ ·2H ₂ O	10 mM
116.89 g	NaCl	2 M

Dissolve in ~800 ml distilled water. Adjust pH to 7.4 with concentrated HCl. Add distilled water to 1000 ml. Filter before use (0.45 µm). Store at 4 °C for up to 3 months.

Important!

- Hoechst dye is a possible mutagen. Wear gloves when handling and wear a mask when weighing.
- All solutions must be at room temperature before measuring fluorescence.
- Prepare Assay Solution fresh daily.
- Filter TNE buffer before adding dye. Do not filter once dye is added.
- We suggest generating a standard concentration curve as described in the DyNA Quant manual to establish linearity of the assay in the range of interest.

Example concentration calculation

amount	$2 \mu\text{l} \times 100 \text{ ng}/\mu\text{l} = 200 \text{ ng}$
final conc. in cuvette	$200 \text{ ng}/2 \text{ ml} = 100 \text{ ng/ml}$

printed in the USA

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