

# Thermo Electron Black Clear Bottom 96 Plate

Catalog no: 8220

Black Clear Bottom 96 plate + lid, tissue culture treated, sterile

- **Sterile:** ready to cultivate bacteria and fungi
- **TC treated:** perfect for mammalian tissue culture - no need for chemical treatment such as collagen coating
- **Individually packaged with lid:** prevents contamination of microplates
- **Unique design:** eliminates cross talk
- **Optimal optical clarity:** perfect for microscopic viewing, suitable for top and bottom reading instruments
- **Low background fluorescence:** increased signal to noise ratio

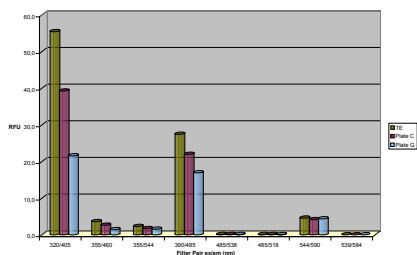


Figure 1: Background Fluorescence for Black Clear Bottom Plates

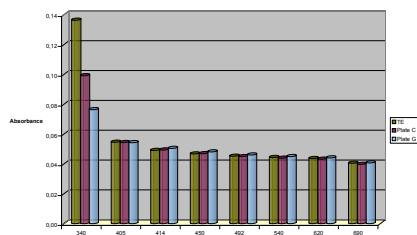


Figure 2: Background Absorbance for Black Clear Bottom Plates

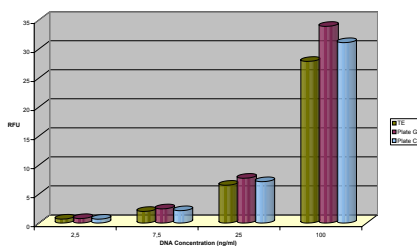


Figure 3: Signal Versus Background Values for Black Clear Bottom Plates

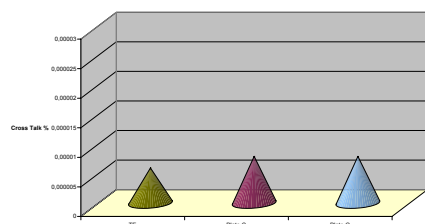


Figure 4: Cross Talk % for Black Clear Bottom Plates



## Background Fluorescence and Cross Talk Properties

Background fluorescence and/or autofluorescence is a major obstacle in the development of microplate based fluorescent assays, and has several sources. Besides the sample and diluent components as well as miscellaneous contamination (dust, fingerprints etc.), plate material is a possible source of background. Thermo black clear bottom plate's background fluorescence is on a low level measured with all main filter pairs; the level is the same as that of the main competitors (Figure 1). Background absorbance is also minimal up to 405 nm thus not interfering with absorbance measurements (Figure 2). Fluorescent signal to noise ratios have been studied using bacteriophage lambda DNA, measuring the fluorescence intensity and calculating the intensity versus fluorescent background ratio. The values are shown in Figure 3.

Cross talk is something describing whether or not a signal produced in a well of a microplate stays in that particular well without interfering with the signals of the adjacent wells. When a microplate has low cross talk, one can be sure for example there will be no false positive results because of high signals in adjacent wells. When cross talk values were determined for Thermo black clear bottom plates using Fluorescein as fluorochrome, the plate was found to have very low cross talk%. The value for Thermo plate and those for some other manufacturers plates are shown in Figure 4.