Brigham Research Assay Core (BRAC)
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Estradiol and Estrone in Serum or Plasma

Method:	Liquid Chromatography-Tandem Mass Spectrometry (LC/MS/MS)
Description:	Estradiol and Estrone in serum are extracted by Solid Phase Extraction (SPE), derivatized with dansyl derivitiaztion, separated/eluted by High Performance of Liquid Chromatography (HPLC), and determinated by Mass Spectrometry (MS) in Electrospray Ionization (ESI^+) source and multiple reaction monitoring (MRM) of transition. Deuterated stable isotope is utilized for the calibration of assay.

Collection and Performance Characteristics

Tube type:	Preferred: SST Alternate: Plasma
Minimum Volume:	0.5 mL
Lowest Reportable Value (Limit of Quantification):	1pg/mL
Dynamic Range:	1-500pg/mL (Estradiol); 1-250pg/mL (Estrone);
Precision:	Intra-assay: <5% RSD Inter-assay: <12%RSD
Reference Ranges:	Estradiol Male: 10 - 50 pg/mL Female (premenopausal): 30 - 400 pg/mL Female (postmenopausal): 0 - 30 pg/mL Estrone Male: 10 – 60pg/mL Female (premenopausal): 17-200 pg/mL Female (postmenopausal): 7-40 pg/mL