Saliva analysis is a convenient, non-invasive and rapid method for assessing estradiol (E2) levels. However, particularly in postmenopausal women, the low salivary E2 levels are often near or below the sensitivity of available assays, compromising both accuracy and precision. We present results using an extraction step prior to E2 assay, which concentrates the sample to increase sensitivity and removes potentially interfering substances.

Morning saliva samples were obtained from premenopausal (mid-luteal phase, n=4,651) and postmenopausal women (n=1,770) not taking hormones, and from postmenopausal women receiving oral conjugated equine estrogens (Cenestin, n=119; Premarin, n=439), topical E2 cream (compounded E2, n=1619), transdermal E2 patches (Climara, n=623; Vivelle, n=1619), or oral micronized E2 (Estrace, n=145; Premarin, n=439), for assessing estradiol (E2) levels. However, particularly in the postmenopausal population most likely to require monitoring of estrogen therapy, the low salivary E2 levels are often near or below the sensitivity of available assays, compromising the sample to increase sensitivity and removes potentially interfering substances.

The functional sensitivity of the assay was determined to be 0.8 pg/ml, compared with >2 pg/ml without extraction.

Results are shown in the tables below: