Title: Equine Attraction to Essential Oil Odours.

J. M. Hurley & D. Goodwin

University of Southampton, School of Psychology, Highfield Campus, Southampton, Hampshire, SO17 1BJ.

**Abstract**

There are a wide range of products containing essential oils. Aromatherapy for horses is becoming popular with owners however there are few published studies on equine response to essential oil odours.

The study aimed to identify which essential oils were attractive to horses. The study comprised 10 horses, (5) geldings, (5) mares of mixed breed. Nine organic essential oils plus a control (no oil) were presented in a repeated measures experimental design. Oils were applied to cotton wool and gauze and hung either side of the stable door. Presentation of oils was randomised using a 10 x 10 Latin Square design. Oils were presented in pairs for 120 seconds with a 5 minute interval between tests. Horses were exposed to 5 paired presentations on day 1 and the experiment was repeated on day 2.

Behaviour was recorded on videotape for 120 seconds. Continuous focal sampling was used to analyse behaviour based on an ethogram using Observer 5.0® software.

The time the horses spent investigating each individual test substance was recorded. Range 169.2 seconds (Violet Leaf) to 35.4 seconds (control).

Kendall’s W coefficient of concordance compared agreement in duration of interest between the horses. The mean ranked duration of investigation was significant (W= 0.272, n=10, p= <0.05). To compare differences between the duration of interest, individual oils were tested against the control using the Wilcoxon signed ranks test. Significant differences were found between the control and Peppermint (*Mentha piperata*) p=<0.01, Violet Leaf (*Viola odorata*) p=<0.05. Valerian *Valeriana officinalis*) and Lavender (*Lavendula angustifiolia*) were approaching significance at p=<0.08 and p=0.09 respectively.

Although only a limited number of oils were tested, horses demonstrated a significant attraction to Peppermint, Violet Leaf and were also attracted to Valerian and Lavender. This study is relevant for horses exposed to essential oils in horse care products.