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A FUNDAMENTAL STUDY OF ALPHA-NAPHTYL ACETATE ESTERASE  
STAINING IN EQUINE PERIPHERAL BLOOD LYMPHOCYTES

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Alpha-naphthyl acetate esterase (ANAE) staining was investigated in equine peripheral blood lymphocytes.

The results are summarized as follows :

1. The optimal staining conditions of equine peripheral blood lymphocytes for ANAE were 4°C, 19 hours, pH 6.0–6.5.
2. The ANAE positive percent was retained even when slides were kept at room temperature for 24 hours before fixation or for 1 month after fixation.
3. The ANAE positive percent varied when equine peripheral blood was stored at 4°C and anticoagulated with EDTA-2Na, Heparin-Na, Citrate-Na and ACD-A solution. The best results were obtained with Heparin-Na; in this case, a positive percent was retained for 8 hours.
4. The ANAE positive percent remained unchanged throughout the day.
5. The percent and absolute number of ANAE positive lymphocytes of a normal thoroughbred were, respectively, 43.2% and  $1.8 \times 10^6/\text{ml}$ , and there were no significant differences among males, geldings and females.
6. The ANAE positive percent of nylon fiber nonadherent lymphocytes was  $87.6 \pm 10.0\%$ , while that of adherent lymphocytes was  $31.7 \pm 10.9\%$ .