Demonstration and Quantification of “Hyperchromic” Erythrocytes by Haematological Analysers
Application to Screening for Hereditary and Acquired Spherocytosis

DOLPHE KUTTER, NATHALIE COULON, FERNAND STIRN, MARTINE THOMA, JERZY JANECKI *

Laboratoires réunis Junglinster (Grand Duchy of Luxembourg)
*Sta modzielaj Pracowni Informatyki Klinicznej Instytutu Biocybernetyki i Inżynierii Biomedycznej PAN - Warsaw

SUMMARY

The double laser beam diffraction of spherized RBC used in the ADVIA 120® haematological analyser allows quantitation of cells aberrant not only by their volume but also by their haemoglobin concentration. The present investigation provides arguments for the identification of hyperchromic RBC as spherocytes, mainly the close relation between % hyperchromic cells and % lysed by the cryohaemolysis test. The percentage of hyperchromic erythrocytes may no longer be considered an instrumental artefact. Without allowing a definite diagnosis of hereditary spherocytosis, an increased percentage of hyperchromic cells indicates the degree of spherocytosis, making it an excellent automated and cost-free screening parameter for inherited and acquired corpuscular haemolysis. (Clin. Lab. 2002:48:163-170)