

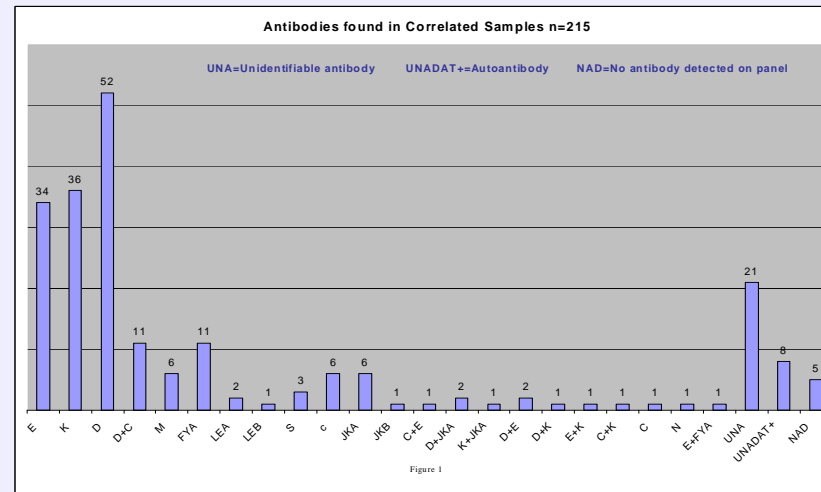
A Comparison of Two Automated Systems for Antibody Identification

Background Our regional blood donor testing facility uses an automated solid phase antibody identification method to determine the specificity of antibodies detected in routine donor screening. This method resulted in a number of samples for which the specificity of the antibody could not be determined (unidentifiable antibody). Since our laboratory also has an automated gel system, we performed a study to establish the validity of the automated gel method for antibody identification and to determine if a decrease in unidentifiable antibody rate was achievable. A comparison of antibody identification on the two systems was performed.

Methods Donor samples with a positive antibody screen using an automated solid phase pooled cell method were further tested using an automated gel three cell screen. Antibody identification was then performed on the donor samples found positive by three cell screen. Each of these samples was tested using antibody identification panels on the automated solid phase system and on the automated gel system.

Results Two hundred thirty two samples were tested for antibody identification by both solid phase and gel systems during the review period. The two methods correlated on 93% (215) of the samples tested (figure 1); the methods did not correlate on 17 samples (figure 2). Antibodies identified by the automated gel panels but not detected by the automated solid phase panels consisted of four examples of anti-D, two anti-C, and one anti-e. Antibodies detected by automated solid phase panels but not detected in the automated gel panels consisted of four examples of anti-V and two examples of anti-C. The rate of unidentifiable results for automated solid phase was 14%; the rate for automated gel was 13%.

Conclusion The correlation rate between the two automated antibody identification methods indicated that the automated gel method was acceptable for use in place of or in addition to the automated solid phase identification method. However, there was not a significant decrease in the rate of unidentifiable antibodies when using the automated gel method as compared to the automated solid phase method. As this study was performed on samples that were initially found positive by both solid phase and gel screening methods, it does not compare the initial sensitivity of the two methods. A study of samples with a negative initial antibody screen by solid phase re-tested by the gel method would provide this additional information.



n	GALILEO ID	PROVUE ID
1	Unidentifiable antibody	e
2	D+C+V	D+C
3	D+C+V	D+C
4	E	D+E
5	No antibody detected	Unidentifiable antibody
6	No antibody detected	D
7	D+V	D
8	D	D+C
9	No antibody detected	D
10	No antibody detected	C
11	No antibody detected	D
12	Unidentifiable antibody	No antibody detected
13	D+V	D
14	Unidentifiable antibody	No antibody detected
15	D+C	D
16	D+C	D
17	Unidentifiable antibody	No antibody detected

Poster ID SP455

Session # II

Authors:

N. Haubert

A. Little

M. Dixon

G. Robertson

S. Caglioti

Blood Systems
Laboratories
Bedford, TX

