1. Neoarsphenamine.
2. Acid solutions of formaldehyde sulfoxylate (formaldehyde sulfoxylic acid).
3. Strongly alkaline solutions of salvarsan.

Methylene blue is not decolorized by:

1. Sulfarsphenamine.
2. Neutral or alkaline solutions of formaldehyde sulfoxylate.
3. Acid or slightly alkaline solutions of salvarsan.
4. Solutions of formaldehyde bisulfites, either acid, alkaline or neutral.

Work is now in progress on a titrametric application of this test which appears to give promise of indicating certain variations in commercial neoarsphenamines which compare favorably with certain chemical and biological characteristics of the different products.

138 (2661)

Group specific flocculation reactions with alcoholic extracts of human blood.

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In a previous communication it was stated that by adding inactivated hemolytic immune sera to emulsions of alcoholic extracts of blood, flocculation reactions can be obtained.[1]

In continuation of our experiments, tests were made with rabbit anti-human blood immune sera. It was found that in this case also a certain number of the immune sera gave positive reactions under the conditions of our experiments. The immune sera were prepared by injections of Group I and of Group II blood corpuscles (American nomenclature).[2] Some of the most active anti-group II immune sera showed a distinctly stronger flocculation with the extracts of II corpuscles than with those of Groups I and III (as shown in the table). To make the emul-

[1] Landsteiner, K., and van der Scheer, J., PROC. SOC. EXP. BIOL. AND MED., 1924, xxii, 170.

[2] *J. Am. Med. Assn.*, 1921, lxxvi, 130.

sions, 1 cc. of the filtered alcoholic extract prepared as described previously[1] was blown with a pipette into 5 cc. of saline solution.

TABLE I.

	0.2 cc. emulsion of alcoholic extracts of corpuscles.									
	Blood No. 1	Blood No. 2	Blood No. 3	Blood No. 4	Blood No. 5	Blood No. 6	Blood No. 7	Blood No. 8	Blood No. 9	Blood No. 10
0.2 cc. inactivated immune sera diluted ½	Group I	Group I	Group I	Group I	Group II	Group II	Group II	Group II	Group III	Group III
I. S. Group II No. 21	f. tr.	f. tr.	tr.	+	+++	+++	+++	+++	f. tr.	0
I. S. Group II No. 22	f. tr.	f. tr.	tr.	+	+++	+++	+++	+++	0	0

TABLE Ia.

	0.2 cc. emulsion of alcoholic extracts of corpuscles.							
	Blood No. 1	Blood No. 3	Blood No. 11	Blood No. 12	Blood No. 6	Blood No. 7	Blood No. 8	Blood No. 13
0.2 cc. inactivated immune sera diluted ½	Group I	Group I	Group I	Group I	Group II	Group II	Group II	Group II
I. S. Group I No. 17	f. tr.	f. tr.	tr.	0	tr.	tr.	tr.	tr.
I. S. Group I No. 27	0	0	0	0	0	0	0	0

These tests show that with alcohol, group-specific substances can be extracted from erythrocytes. It has been pointed out by Schiff and Adelsberger[3] that a similarity exists between a fraction of the group specific part of Group II corpuscles and the heterogenetic antigen of Forssman. We found, however, when emulsions of the two kinds were tested with both Group II immune sera and heterogenetic sera, that the reactions manifested a striking difference provided the emulsions were prepared as described. The alcoholic extract of heterogenetic antigen was made by extracting 1 part of minced horse kidney with 5 parts of 95 per cent alcohol at room temperature for 48 hours. The heterogenetic immune sera were prepared by injections of horse kidney into rabbits.

TABLE II.

0.2 cc. inactivated immune sera diluted ½	0.2 cc. emulsion of horse kidney extract	0.2 cc. emulsion of Group II blood extract
Antihuman II No. 20	tr.	+
Antihuman II No. 21	f. tr.	++±
Antihuman II No. 22	tr.	++±
Heterogenetic No. 402	+++	0
Heterogenetic No. 403	++	0
Heterogenetic No. 54	+++	+

[3] Schiff, F., and Adelsberger, L., *Ztschr. f. Immunitätsforsch.*, 1924, xl, 335.