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Blood type screening on polymeric strip test for clinical samples

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The point of care (POC) blood group typing has been developed for conveniently and immediately tests by polymeric strip test. Poly (methyl methacrylate (PMMA)) substrate was chosen and then designed the functional group layer to establish whether person is A, B, AB, or O blood type by naked eye. The substrate was modified by chemical bonding via carboxyl-methyl dextran to immobilize ABO antibody in the range of 2.5-60% v/v concentration. Clinical samples both red blood cell and EDTA blood were tested by our strip test and compared with a standard agglutination method. The result was found that there was consistent with standard method for all 80 samples. Red blood cell blood group typing is 100% precision detection and EDTA blood group typing is 97.5% precision for blood typing detection.

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