



cobas m 511 integrated hematology analyzer: Overview of the technology

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A new hematology system for the Complete Blood Count (CBC) has been developed at Roche Diagnostics Hematology in Boston, USA. The **cobas m 511** combines a digital morphologic analyzer, cell counter and classifier into one streamlined unit. A known volume of blood is automatically placed onto a microscope slide in a way that all cells are countable. Within the instrument the slide is automatically stained and then imaged using a high speed multi-spectral digital imaging system. From the stained slide, the instrument calculates all the elements of the CBC, analyzing white blood cells, red blood cells, platelets, nRBCs and reticulocytes. An automated five part WBC differential is performed. The system operates at 60 samples per hour. At the completion of the image analysis digital images are available so that the medical technician can deal with any flags immediately and efficiently on a dedicated viewing station. This presentation describes the methods used inside this new CBC system. Novel blood printing onto a slide, fast and reproducible staining, and high speed imaging using a four color LED light source will be presented. Presentation of results on the viewing station will be shown.