

**Method for enrichment of fetal cells from maternal blood and use of same in determination of fetal sex and detection of chromosomal abnormalities**

An enriched fetal cell sample is prepared from maternal blood by first separating a maternal blood sample on a three layer density gradient, and collection of the layer containing the lymphocytes and a layer immediately beneath the lymphocytes which presumably contains the nucleated fetal red blood cells and low density maternal red blood cells. The top layer in the gradient would contain the plasma and lighter components and the bottom layer would contain high density maternal red blood cells. The collected cells are then placed in a hypotonic solution and centrifuged to separate a fetal cell pellet, which contains enriched levels of fetal cells of varying types. The recovered pellet is fixed twice with Carnoy fixative and the fixed cells are then spread on a slide for FISH analysis.

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