

## Giemsa-trypsin Banding

Section of Cancer Genomics, Genetics Branch, NCI  
National Institutes of Health

### Reagents

**Earle's Balanced Salt Solution (BSS)**

**Fetal Bovine Serum**

**Giemsa stain, original azure blend**

Harleco 620G/75

**Gurr's buffer tablets, pH 6.8**

Biomedical Specialties, Santa Monica, CA

**Trypsin solution 2.5%**

GIBCO, Cat. 15240-062

**Water, sterile**

### Preparation

**Trypsin working solution**

Trypsin solution, 2.5%	1.5 ml
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Earle's BSS	50 ml
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**Fetal bovine serum solution**

Fetal bovine serum	1 ml
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Earle's BSS	50ml
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**Gurr's buffer solution, pH 6.8**

Dissolve 1 tablet in 1 L sterile water

**Giemsa Stain working solution**

Giemsa stain	1 ml
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Gurr's buffer solution, pH 6.8	50 ml
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### Procedure

1. Age the air-dried slide overnight in a dry oven at 55-60°C. Remove and bring to room temperature just prior to banding.

2. Grasp slide with forceps and dip in trypsin solution. Use a back-and-forth motion and expose to solution for 8-10 seconds. Time may have to be adjusted, depending on the degree of banding.
3. Quickly remove slide from trypsin and dip in fetal bovine serum solution. Move slide back-and-forth in the solution, or dip 5 times.
4. Pre-rinse the slide by dipping in a third jar containing Gurr's buffer, using the same technique as in step 3.
5. Place slide in Giemsa staining solution for 8-10 minutes.
6. Rinse slide in distilled water, using the same technique as in step 3. (If slide is left in water too long, the stain will fade).
7. Allow slide to air dry. Examine without mounting, using dry objectives; coverslip with Permount for examination with oil objective.