Natural Color Extraction Methods - Jamaica

1. Sorrel (Hibiscus sabdariffa) - Red/Burgundy

Goal: Extract anthocyanins for deep red color.

Materials: Sorrel calyces, distilled water, citric acid, strainer, jars, preservative.

Method:

- 1. Soak 100g dried or 300g fresh sorrel in 1L acidified water (pH ~3.0) for 24-36 hrs.
- 2. Stir, filter, and reduce at low heat (<60C). Store in amber bottles.

Shelf Life: 4-6 weeks refrigerated, or 3-6 months frozen.

2. Beetroot - Red to Violet

Goal: Extract betalains for red-violet pigment.

Materials: Fresh beetroot, blender or juicer, strainer, lemon juice, optional preservative.

Method:

- 1. Blend or juice beetroot. Filter pulp.
- 2. Adjust pH to ~4.5. Store in amber bottles.

Shelf Life: 1-2 weeks fresh, 3-6 months frozen, 6-12 months powder.

3. Turmeric - Bright Yellow

Goal: Extract curcumin pigment.

Method 1 - Liquid:

- 1. Soak grated turmeric (200g/L) in 70% ethanol for 3-5 days.
- 2. Filter and store.

Shelf Life: 6-12 months with alcohol.

Method 2 - Powder:

1. Peel, dry, and grind turmeric into powder.

Shelf Life: Up to 1 year.

4. Annatto (Achiote) - Orange to Red-Orange

Goal: Extract bixin (oil) or norbixin (water).

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Method 1 - Oil:

- 1. Simmer seeds in oil (100g/500ml) at ~75C for 15 min.
- 2. Strain and store.

Method 2 - Water:

- 1. Simmer seeds in water (100g/L) for 20 min.
- 2. Adjust pH with citric acid. Filter and store.

Shelf Life: 2-6 weeks liquid, 12+ months powder.

5. Blue Pea Flower - Blue to Purple (pH-sensitive)

Goal: Extract anthocyanins for blue pigment.

Materials: Dried/fresh flowers, water, citric acid.

Method:

- 1. Steep flowers in 250ml cool water for 30-120 mins.
- 2. Filter and adjust pH as needed.

Shelf Life: 7-10 days fresh, 6-12 months powder.