## Aminosalicylic Acid Tablets

Formulation: 5-Aminosalicyclic acid (5-ASA), 73.3%; sodium chloride, 11.7%; povidone, 4.4%; alcohol SDA-3A, q.s.; lactose, 8.8%; calcium stearate/sodium lauryl sulfate, 1.76%; sodium starch glycolate, 0.29%.

### Manufacturing Directions

1. Sodium chloride is milled through a Whistler mill, using a small slotted screen.
2. 5-ASA is combined with the sodium chloride and mixed for 5 minutes in a ribbon blender. The powder blend is milled through a FitzMill at high speed (1B band) and returned to the ribbon blender.
3. Povidone/alcohol solution is added to the powder blend while the mixer is running to form a wet mass.
4. The wet mass is passed through a FitzMill (1/2 in., perforated band) with hammers forward at high speed. The wet granulation is trayed and dried for 16 hours at 55°C. The dried mixture is passed through a FitzMill (2A band) with knives forward at medium speed.
5. The resultant blend is placed in a ribbon blender. Lactose, calcium stearate/sodium lauryl sulfate, and sodium starch glycolate is passed through a 40-mesh screen.
6. The screened powders are added to the ribbon blender and mixed for 5 minutes.
7. On a conventional tablet press, the finished granulation is compressed into 3/8-in. tablets, using standard concave tooling. The tablets meet the target weight requirements, are about 0.175-in. thick, have a hardness of 8 to 15 kPa, and a friability of NMT 0.4%.
8. 100 kg of compressed tablets is placed into an Accela-Cota pan and warmed to about 40°C exhaust temperature.
9. 5 kg of Opadry Enteric (Colorcon, Inc.) is dispersed in an alcohol (SDA-3A) and water mixture (composition of alcohol/water is 25.5 and 2.8 kg, respectively).
10. This solution is spray coated on tablets using an air-atomization system as follows: 2 spray guns at 35 psi each set to deliver about 60 g/min, maintaining an exhaust temperature of 35°C to 45°C. The coated tablets are dried in the Accela-Cota pan for 1 hour at 35°C to 45°C.
11. The tablets are polished in the pan, using 1 g powdered carnauba wax.

## Amiodarone Tablets (200 mg)

| Bill of Materials | | | |
|---|---|---|---|
| Scale (mg/tablet) | Item | Material Name | Quantity/1000 Tablets (g) |
| 200.000 | 1 | Amiodarone hydrochloride | 200.000 |
| 86.000 | 2 | Lactose monohydrate | 86.000 |
| 27.500 | 3 | Starch (maize) | 27.500 |
| 8.500 | 4 | Povidone (PVP K-30) | 8.500 |
| 25.000 | 5 | Starch (maize) | 25.000 |
| 2.000 | 6 | Magnesium stearate | 2.000 |
| 1.000 | 7 | Colloidal silicon dioxide (Aerosil 200) | 1.000 |
| – | 8 | Purified water | 116.67 |

### Manufacturing Directions

*Note:* Avoid overmixing lubricants because it reduces hardness.

1. Sieving and dry mixing: Sift items 1, 3, and 2 through a 500-μm stainless steel sieve. Load into the mixer. Mix for 5 minutes at low speed.
2. Preparation of binder
   a. Dissolve item 4 in 16.67 g of item 8 by using a stirrer at a slow speed in a stainless steel container.
   b. Pass item 5 through a 250-μm sieve.
   c. Make a homogeneous slurry of item 5 in 25.0 g of item 8 (30°C) in a stainless steel container. Ensure that it is free of lumps.
   d. Heat 75.0 g of item 8 to 90°C in a stainless steel container. Add the slurry from step 2. Stir until complete gelatinization occurs. Cool to 50°C.
   e. Add the solution from step 2 into step 3 and stir for 5 minutes.
   f. Check the quantity of the binder: theoretical weight, 150 g. Adjust the weight with purified water by mixing if required.
3. Kneading
   a. Knead the powder in a mixer (Diosna) with the binder, while mixing at low speed over a period of 2 minutes. Scrape the sides and the blades. Mix and chop at low speed for 2 minutes.
   b. Check the end point of granulation. If required, add more purified water to get the end point. (The end point of the granulation is the point when the wet mass consists of little or no lumps of the granules.)
   c. Unload the wet granules in a stainless steel tray for drying.
4. Drying
   a. Dry the wet granules at 550°C for 5 hours.
   b. Check the LOD: the limit is 1.0% to 1.5%. If required, dry further at 550°C for 1 hour. Check the LOD.
   c. Transfer the dried granules to a polyethylene bag.
5. Grinding: Grind the dried granules through a 1.25-mm sieve, using a granulator at medium speed. Collect in a polyethylene bag.
6. Lubrication
   a. Sift items 6 and 7 through a 250-μm sieve in a stainless steel sieve. Collect in a polyethylene bag. Take approximately 66.67 g of granules from step 5 into the polyethylene bag. Mix manually. Add into step 5. Mix for 1 minute.
   b. Store in a polyethylene bag.
7. Compression and specifications: Compress the granules by using a rotary tabletting machine, 10-mm round plain convex punch. (Weight of 10 tablets: 3.5 g ± 3%.)