



Our Performance - Animal Healthcare Product

MULTI-STEP HEALTHCARE PRODUCT

Objective: Client requested 1 ton product within 12 weeks (agreed to a 16-wk timeline) with very preliminary information about the 4-step chemistry

Week 1

- Formed project team
- Set initial goal of delivering 50 gms based on client's preliminary process at specification of 90% purity (GC)
- Conducted Risk Analysis & Feasibility study

Week 1-3

- Procured raw materials
- Completed 50 gms synthesis-established a higher purity standard of 95%
- Sent sample to customer

Week 3-4

- Initiated 500 gms experiment while 50 gms sample being assessed
- 50 gms sample approved; 500 gms sample sent to customer
- Initiated 3 batches at 3 kg scale; 500 gms sample being assessed
- 500 gms sample approved, 3 kg sample sent



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Week 4-6

- Optimized input ratios and output norms
- Developed analytical methods
- 3 kg sample approved

Week 16-14

- Manufactured multiple batches at 50-kg scale
- Supplied nearly 1000 kgs in 30 days to support clinical trials
- Provided dossier for regulatory registration

Week 14..

- Requirement of purity levels revised to 98%
- Impurity profile incorporated
- Commercial quantities supplied to revised specifications

Resonance Delivered:

- Required quantity in 14 weeks (vs.16 weeks) at higher than initial spec
- Delivered detailed documentation necessary to be included in regulatory registration
- Customer requested additional commercial quantities at higher spec

