



Annexure-I

New Delhi

04.09.2006

CONTROLLING/MANAGING QUALITY OF PESTICIDES

Guidelines for the minimum infrastructure to be created by the manufacturers of pesticides and their formulations to meet the requirements for issue of licence by respective State Governments (Licencing Authority)

These are the general requirements, however, for individual chemicals, specific requirements are to be installed and additional equipment is to be supplemented to suit the reactions involved in the manufacturing process. Further, other specifications as per the Insecticides Rules viz. medical facilities, protective clothing, respiratory devices, first aid measures, training towards safety precaution and handling safety equipment, safety disposal, etc. are required to be made.

1. The minimum infrastructure with respect to manpower shall be as under

<u>Sr. No.</u>	<u>Manpower</u>	<u>For Technical plant</u>	<u>For formulation plant</u>
1	Production Manager	R	R
2.	Supervisor	R	R
3.	Instrument and process control personnel	R	R*/NR
4.	Maintenance Personnel (Plant and utilities)	R	R
5.	Store Keeper (Raw material and finished products)	R	R
6.	Quality Control Chemist	R	R
7.	Security personnel	R	R

* In case of automatic plant

2. Minimum infrastructure with respect to machinery & equipment

A. For technical plant

<u>Sr. No.</u>	<u>Equipment</u>	<u>For Technical plant</u>
1	Control console	R
2.	Feed tank for raw material	R
3.	Reactors	R
4.	Distillation towers	R
5.	Evaporators	R
6.	Condenser / heat exchanger / boiler/ extinguisher plant / chilling system / steam plant	R
7.	Crystallizer	R
8.	Centrifuge	R
9.	Drier	R
10.	Phase separator	R
11.	Extractor	R



12.	Storage tank	R
13.	Process water tank	R
14.	Pipelines with conventional colour code	R
15.	Gas plant	R

B. For Formulation plant

S.No.	Equipment	Solid, DP, WG, SP, etc	WG/G	Liquid (EC, EW, SL)
1.	Feeding channel / Chute	R	R	R
2.	Jaw Crusher	R	R	NR
3.	Raw material feed tank	R	R	R
4.	Pulveriser	R	R	NR
5.	Blender	R	R	R
6.	Siever	R	R	R
7.	Bag Filter	R	NR	NR
8.	Homogenizer	R	R	R
9.	Ball mill	R	NR	NR
10.	Weighing machine / platform balance	R	R	R
11.	Vessel with stirrer	R	R	R
12.	Drier	R	R	NR
13.	Cooling machine	NR	R	R
14.	Sprayer	NR	R	NR
15.	Water tank for liquid	NR	NR	R
16.	Filter	NR	NR	R

3. Equipment for quality control laboratory

1. Analytical weighing balance
2. Hot air oven
3. Refrigerator
4. pH meter
5. Spectro-photometer / colourimeter
6. GLC / HPLC depending on the products analytical process as in the specification.
7. Standard glassware, chemical and general requirements for laboratory
8. Pesticide Repository
9. Specification / BIS standard of the product to be manufactured / formulated
10. Sieve shaker.
11. Fume Hood
12. Distilled water still
13. Flash point apparatus
14. Melting point apparatus



4. **Packaging plant and equipment**

1. Packaging machinery.
2. Filling machine (automatic / semi automatic).
3. Weighing machine
4. Bagging machine
5. Sealing machine
6. Labeling equipment.

***** ***** *****
