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Diploma in Pharmacy 1st Year
Pharmaceutics
Experiment
To formulate paracetamol tablet

Aim:

To formulate paracetamol tablet as per monograph standards and dispense with appropriate packaging and labelling.

Reference :

‘ Dr. Gupta G.D , Dr. Sharma Shailish , Dr. Sharma Neelam’ “Practical Manual of Pharmaceutics” Published by Nirali Prakashan, Page no 82 – 85

Apparatus and Materials Required :

Mortar and pestle, beaker, sieve # 10, tablet punching machine, hot air oven, paracetamol, lactose, dry starch, magnesium stearate, and tale.

Theory :

Although paracetamol is analgesic and antipyretic, it has no anti-inflammatory properties. The gastrointestinal tract quickly absorbs paracetamol. Paracetamol is classified as a bus classification. Tabletsare solid dosage forms that contain one or more medications, with or without excipients, and are prepared by compression. It has the highest dose precision and the least amount of content variation. Additives tablets are inert compounds that are used in conjunction with active substances. They are as follows

1) **Diluents :** They are fillers used to make up the tablet's required weight. For example, lactose, microcrystalline cellulose, inorganic dicalcium salts, etc.
2) **Binding Agents :** They are used to create a cohesive mass that can be compressed directly. They can be dry or liquid. For example, derivatives of cellulose, gelatin solution, and glucose syrup, Mucilage from tragacanths.

3) **Disintegrating Agents :** These are the agents that are added to tablets to help them break up easier when they come into contact with gastrointestinal fluids. For example, dry starch, starch derivatives, clays, cellulose, and cellulose derivatives.
4) **Adsorbents :** They are addedwhen the formulation comprises liquids, volatile oils, etc.
5) **Antifrictional Agents :** They enhance the flow properties. For example, talc, com starch, silica derivatives etc.

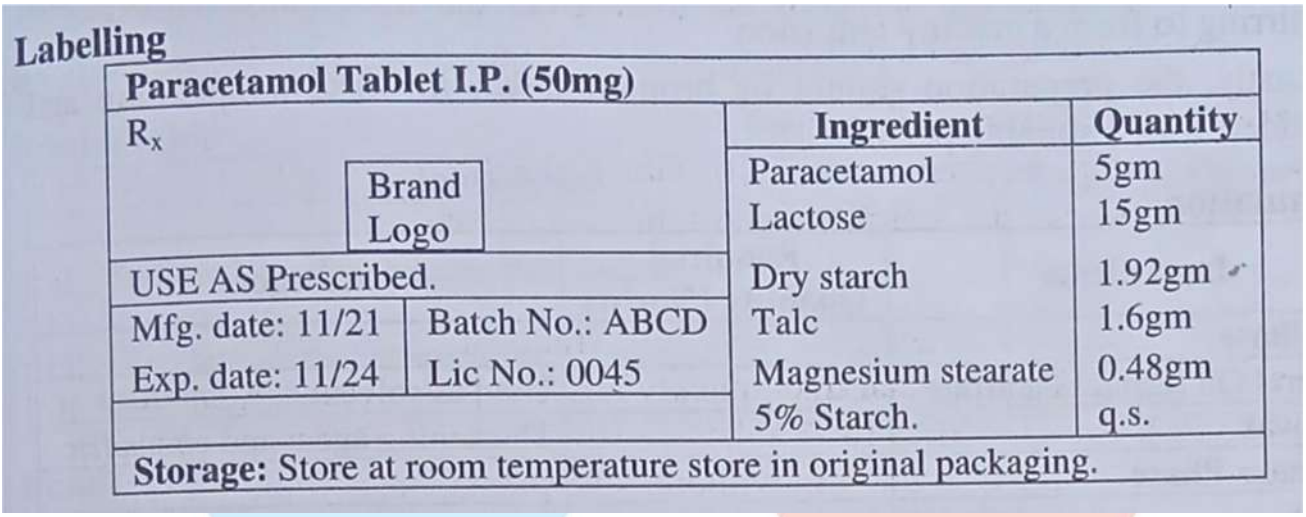
Formulation

Ingredients	1Tablet (mg)	For 40 Tablets(g)
Paracetamol (drug)	125	5g
Lactose (diluent)	327	15g
Drystarch (binder & disintegrant)	48	1.92g
Talc (glidant)	40	1.6g
Magnesium stearate (lubricant)	12	0.48g
5% starch was used as the binding agent	q.s.	q.s.

Procedure :

1) Paracetamol, lactose and half the quantity of starch should be weighed and mixed thoroughly. It should be granulated using 5% starch mucilage as binding agent and should be passed through sieve no. 10 mesh screen.
2) The obtained granules should be dried at 55°C for 1 hour.
3) After drying, dry screening should be done using sieve no 22 mesh screen.
4) The rest of the starch powder along with tale and magnesium stearate should be added and mixed.
5) These granules should be compressed into tablets on a 16 station cadmach rotary tablet machine (12mm).

Labelling :



Labelling

Paracetamol Tablet I.P. (50mg)			
R_x Brand Logo		Ingredient	Quantity
		Paracetamol	5gm
		Lactose	15gm
USE AS Prescribed.		Dry starch	1.92gm
Mfg. date: 11/21	Batch No.: ABCD	Talc	1.6gm
Exp. date: 11/24	Lic No.: 0045	Magnesium stearate	0.48gm
		5% Starch.	q.s.
Storage: Store at room temperature store in original packaging.			

Packaging and Storage :

1. The tablets should be packed in blister packaging, 2, 4, 6, 8, 10, 12, 16. Blister strips consist of a 35gsm paper/9u soft tempered aluminium foil lid and 250p PVC film base in cartons.
2. Tablets should not be stored above 25°C
3. It should be stored in the original packaging.

Result :

The paracetamol tablet was prepared, packaged and labelled.