

Annexure-II

A UNIQUE ANTACID API WITH HIGH ANC, BUFFERING AND CYTOPROTECTIVE ACTION

Abstract

Hyperchlorhydria/hyperacidity is a chronic disorder that has become very common among the people of almost all age groups in our society. The common market available antacids are over the counter products, some of them comprise bicarbonate salts that provide instant relief due to rapid onset of action but are unable to provide long term buffering capacity and hence exhibit 'acid rebound activity' within a short period of time. Another disadvantage of such type of formulation is that, it might lead to severe alkalosis due to enhanced solubility of the alkali metal ions. On the other hand, some of the branded hydroxide based formulations are slow in action due to low acid neutralization capacity (ANC) and hence, fail to provide instant relief from the heartburn symptom.

In view of the above, at CSIR-CGCRI, we have developed a unique inorganic base antacid molecule that exhibits a.) high acid neutralizing capacity with prolonged buffering action at low dose thereby taking care of the 'acid rebound activity' (as per officials) b.) rapid onset of action for instant relief c.) significant cytoprotective action of the active moiety d.) single step cost effective process of synthesis and product development.



Fig. 1 CSIR-CGCRI developed inorganic base antacid molecule (effervescent tablet).

Unique selling points of the above said antacid are: a.) it is globally new molecule (active pharmaceutical ingredient, API) and b.) The API can suffice both bulk drug manufacturing unit and small/ medium to big house pharmaceutical industries c.) An Indian patent has been granted (November, 2021) d.) Three number of solid dosage forms (mouth melting, fast dissolving, soft chewable tablets) as over the counter (OTC) products has been prepared at lab scale.

Market potential of the technology/product: Currently, Indian antacid market is valued at > Rs 1,100 crores and is growing at a strong 21% rate.