



Specializing in hazardous materials transportation.

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# Fax

To: Gigi Corbett From: Ken Summer  
 Fax: 202-366-3012 Pages: 3  
 Phone: 202-366-4465 Date: 2/9/01  
 Re: Aerosol question CC:

- Urgent  For Review  Please Comment  Please Reply  Please Recycle

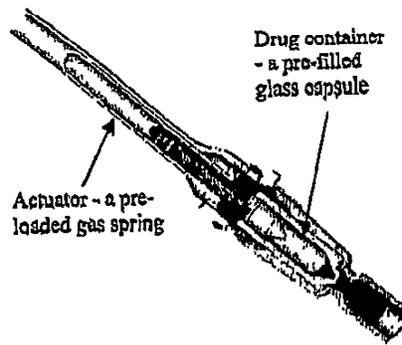
● Comments:

Gigi,  
 I expect the glass capsule of medicine  
 to be less than 5ml/5mg in size.  
 regards,  
 T/A

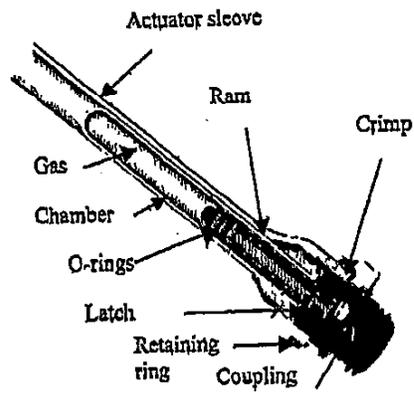


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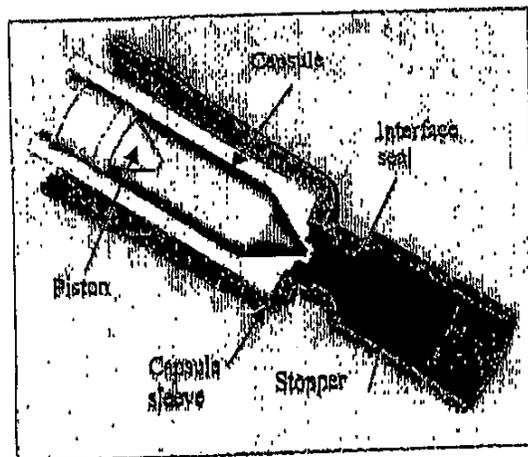
Actuator plus injection solution container:



Actuator:



Capsule assembly:



## 1.1 The mechanics of the injection

Pressurised nitrogen gas inside the chamber is constantly trying to push the ram forward, but is stopped from moving by the latch. Once the tear-off band is removed, the actuator sleeve can be pushed forward relative to the chamber and the coupling, exposing a slot for the latch to move sideways. Damping grease between the sleeve and the chamber prevents accidental actuation, such as by dropping. With sideways movement of the latch the ram is free to move and is accelerated towards the piston in the capsule. The ram hits the piston and drives it down, forcing out the drug.

A unique pressure profile results from this firing mechanism; a high pressure peak at the start of the injection punctures the skin, and a subsequent lower pressure delivers the drug, without damage, into the subcutaneous layer.