

Practical Pharmacology



injection issues

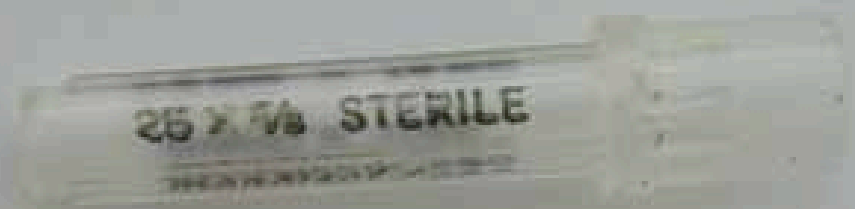
- needles
- bottles
- syringes



needles

- **use correct size**
 - as small as possible
- **maintain sterility**
 - new needle for each injection

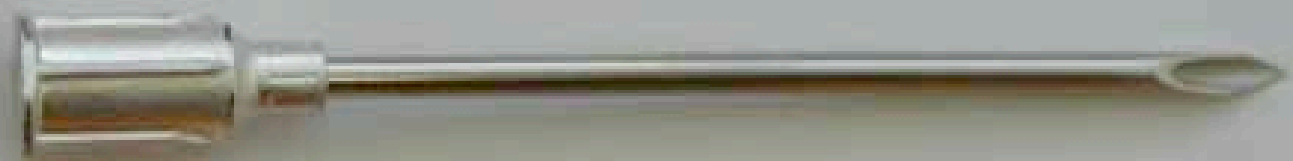




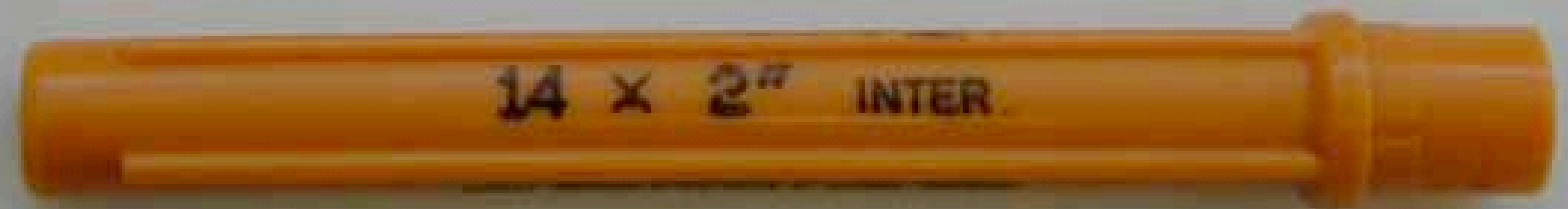
cat



colour coded by gauge



cattle



needles

- **use correct size**
 - as small as possible
- **maintain sterility**
 - new needle for each injection







injection issues

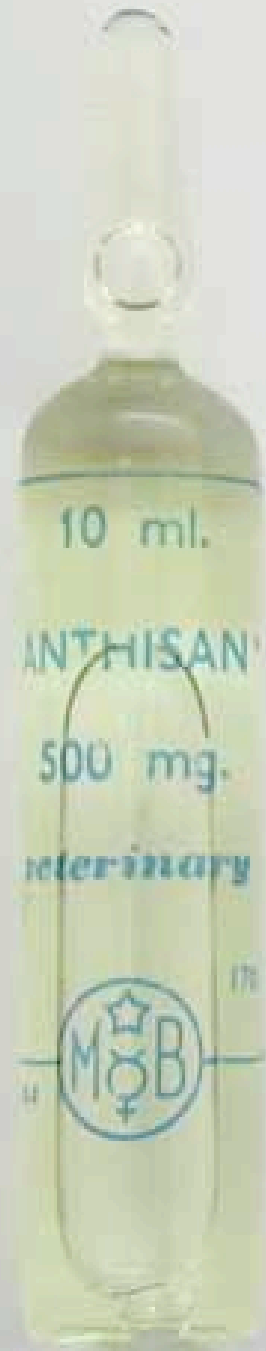
- needles
- bottles
- syringes



bottles

- single use vials
- multi use bottles
- multi use flexible plastic packs





single use vials





break off away from you

beware sharp edges

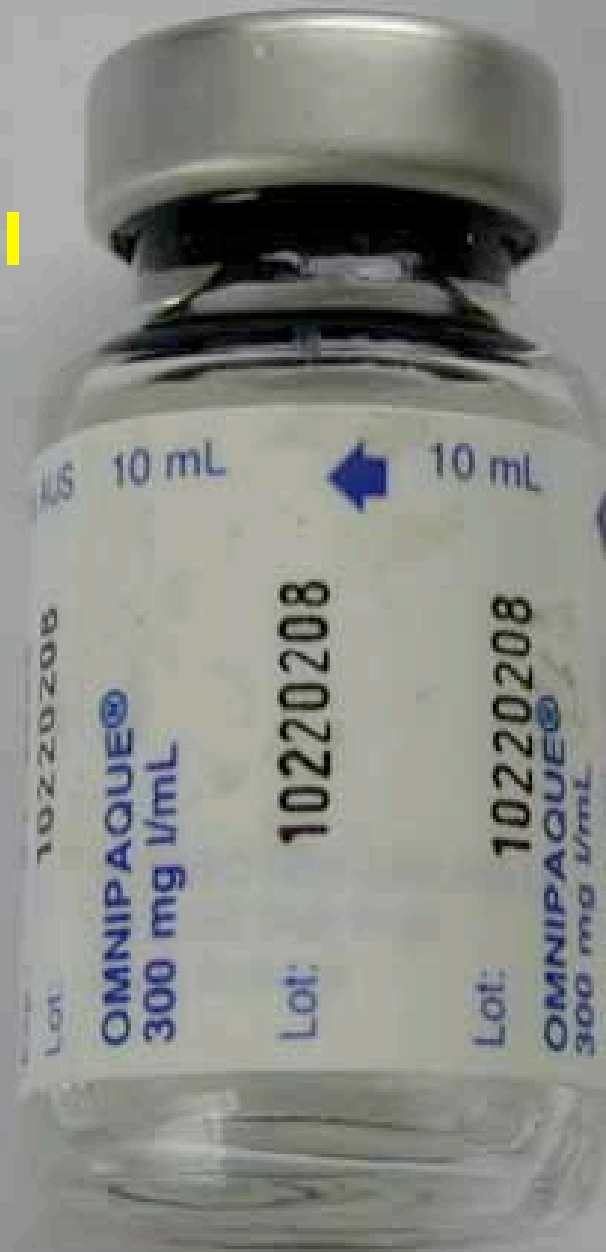


EXP 12/2019
LOT 123456789

note expiry date

break off top

multiuse vial



maintain sterility

beware sharp edges

remove top





A close-up photograph of a metallic, cylindrical component. The component has a central hole and is surrounded by several concentric rings or grooves. The surface is highly reflective and shows signs of wear, including scratches and a dark, irregular mark in the center of the hole. A yellow text label "swab here" is overlaid on the image, pointing to the dark mark. The background is a plain, light-colored surface.

swab here

air injection?

- **air injection**
 - contents under pressure
 - contents can spray out
 - air is not sterile
- **no air injection**
 - difficult to get contents out





No. 128 on hand in 12/1/19

**PARNELL
GLAFEN**

500ml



Parnell Laboratories, Inc. (partially visible)
1919 1/2 17th Street, N.W. (partially visible)





air in

liquid out



flutter valve

avoid using!



air in

BATCH L 69H9

EXP
DATE SEP 04

flexible plastic containers



suspension

not iv

A314

PRESCRIPTION ONLY
KEEP OUT OF REACH OF CHILDREN

Propofol Injection

Propofol

200 mg in 20 mL

For intravenous use.
Store below 25°C. Do not freeze.
Shake before use.
David Bull Laboratories
1-23 Lexia Place Mulgrave

emulsion

OK iv

diluting injections

- **for very small animals**
- **for aqueous solutions**
 - water for injections
 - normal saline
- **for non-aqueous solutions**
 - must know physical chemistry
 - eg, ivermectin - propylene glycol



anaesthetic bottles

- modern vaporisers have keyed fillers





I am here today will be on
with Micky.



1110-50115
5/04
3/04
12011-50115
110
104

1103825034

AERRANE
Isoflurane USP
Inhalation Anaesthetic
250 mL
Baxter

HALOTHANE
250 mL







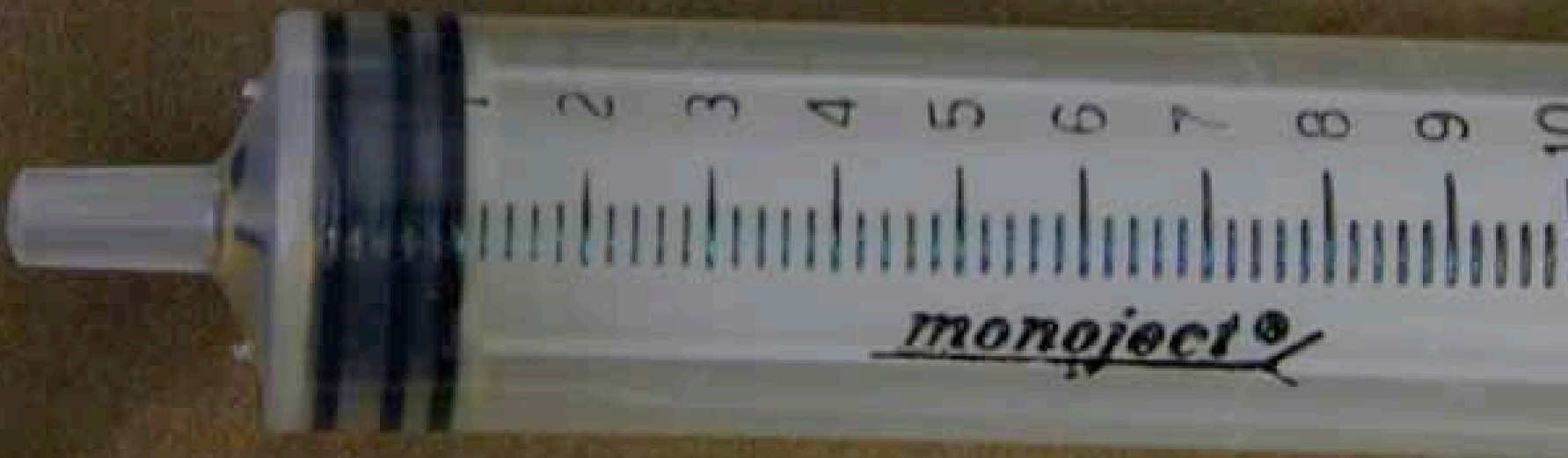
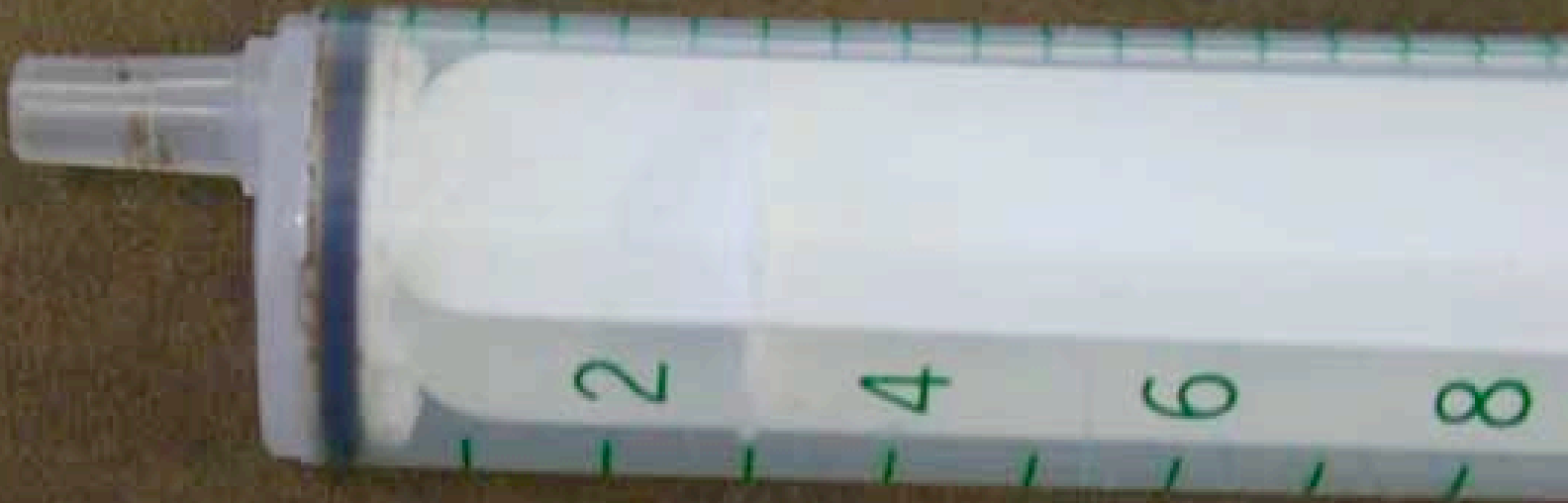


PRESCRIPTION MEDICINE
No. 4450
SEVORANE
SEVOFLURANE
ABBOTT
Manufactured by
Abbott Laboratories
200 East Columbus Avenue
Chicago, IL 60612

syringes

- offset nozzle for iv use
- central nozzle for sc or im use
- care with dispensing
 - iv drug abusers





injection technique

- **site?**
- **swab the injection site?**
- **use a catheter?**



oral drugs

- tablets
- capsules
- liquids



most tablets are coated



cutting exposes active ingredient





use syringes for oral solutions

nozzle which does not accept needle

oral solutions

- **for small animals**
 - dilute as necessary
 - only as much as necessary



practical pharmacology

- mostly common sense
- use small needles
- keep injections sterile
- use oral drugs where possible

