



### **Issue: Water used with Oral Antibiotic Suspensions**

*Raised by:* Leanne Castledine (HCM Yuendumu)

*Background:* Query regarding what quality of water should be used to reconstitute oral antibiotic suspensions.

*Discussion:* In pharmaceutical processes different grades of water quality are required for different purposes, including:

- Water for Injection
- Purified Water
- Highly Purified Water

Some commercial brands producing oral antibiotic powders for suspension, note on their packaging that purified water should be used for reconstitution.

In relation to reconstitution of oral suspensions, the Australian Therapeutic Goods Administration has adopted the European Union quality guidelines, published 15 Feb 2007. These guidelines recommend 'Purified Water' as the minimum acceptable quality of water for reconstituting oral preparations.

Therefore Purified Water (water for irrigation) or sterile water should be used to reconstitute oral antibiotic powder. The most reasonable option for Remote health centres to meet this quality measure is the recommendation to:

- Use purified water (water for irrigation) available from DHCS Regional Hospital Pharmacies (1 litre @ \$2.20/bottle)
- (Smaller health centres where supply of antibiotic suspensions occurs less frequently might wish to use sterile water ampoules. Based on cost of \$13.00/50 x 10ml amps the preparation of one suspension has similar cost to the use of one 1 litre bottle as above. However this is tedious and will be less cost effective if multiple suspensions are prepared.)
- Once opened bottle to be marked with time and date of opening then refrigerated
- Bottle to be discarded if not used within 7 days

Additionally, discussion on this topic revealed that not all health centres utilise a suitable device to accurately measure water. It has been recommended that a suitable measuring container be sourced and provided as standard in all health centres.

*Consultation:* Kieran Behan (ASH Pharmacist), Andrew Crowhurst / Bhavini Patel (RDH Pharmacy), Peter Hatswell (Pharmacist, Alice Springs Priceline Pharmacy)

*References:* Australian Therapeutic Goods Administration: European Union Guidelines Adopted in Australia: [Quality Guidelines of Water for Pharmaceutical Use](#).

*Outcome:* **Purified Water is to be used to reconstitute oral antibiotic powders for suspension.**

A 100ml measuring device with 1ml graduations will be distributed to all health centres.