

Standard Formulations for use of Ora products

The following list of formulae are a consensus list of medications that can be prepared using the Ora® range of suspending products to produce oral liquids. This list has been compiled using data collected from NZ hospitals and the reviewing the current formula in use in the hospital and community setting.

- Concentrations are standard and are based on the evidence available. Where concentrations have been adapted from the original reference this has been done for pragmatic and safety reasons.
- 50:50 ratio of Ora-Plus®:Ora-Sweet® or 100% Ora-blend® should be used for all medicines unless otherwise indicated.
- Ora-Blend Sugar free® and Ora-Sweet Sugar free® can only be substituted for the original Ora-Blend®/Ora-Sweet® products where indicated. Not all medicines have stability information in the sugar free preparations.
- Expiry date for all medicines is 30 days. Stability data is available for some medicines for much longer periods; however the decision to restrict the expiry to 30 days is in line with good manufacturing practice, reduces volumes of medicines in the home and ensures all products are of an acceptable quality.
- Solubility of each medicine in water is listed. Medicines that are soluble are included in this list as it may be appropriate to compound a soluble medicine into a liquid for clinical safety reasons. The decision to supply a liquid should be at the discretion of the prescriber and pharmacist for high risk medicines such as those with a narrow therapeutic index e.g. cardiac medicines. Crushing and measuring part doses of soluble medicines should be considered for patients or families that can safely manage with this process.

Definition	Symbol	Solubility
Practically insoluble	PI	1 in more than 10,000
Very slightly soluble	VSS	1 in 1000 to 1 in 10,000
Slightly soluble	SS	1 in 100 to 1 in 1000
sparingly soluble	SPS	1 in 30 to 1 in 100
soluble	S	1 in 10 to 1 in 30
Freely soluble	FS	1 in 1 to 1 in 10
Specific solubility listed		

- Most products made using these formulae can be stored at room temperature but may also have stability in the fridge. The preferred storage instruction is indicated on the batch sheet.
- Some medicines must be prepared with cytotoxic precautions for handling. It is suggested these medicines only be made in pharmacies where a separate manufacturing area and equipment is available where this requirement can be met. These medicines are highlighted in red. Specific instructions are included in the batch sheet.
- Several medicines are listed that are not funded in the community and require dispensing from hospital pharmacies via the Discretionary Community Supply list. Formulae are included for standardisation.
- Tacrolimus requires formulation with Ora-Plus® and syrup BP (not Ora-Sweet®). Stability information is variable and extra precautions are required for manufacture. It is not recommended this formula be used to make tacrolimus suspension in community pharmacies at this stage. This is only listed for use at Auckland District Health Board for paediatric transplant patients initially and wider access option will be reviewed as appropriate. Formula has not been included for medicines where there is a funded liquid preparation available.

New Zealand Standard Formulations for use of Ora products

Drug	Consensus formulation	Expiry (days)	Solubility	Notes	Reference for stability
Acetazolamide	Ora 25mg/ml	30	VSS	sugar free	Am J Health-Syst Pharm. 1996; 53: 1944-9
Allopurinol	Ora 20mg/ml	30	VSS	sugar free	Am J Health-Syst Pharm. 1996; 53: 1944-9
Amlodipine	Ora 1mg/ml	30	SS		J American Pharm. Assoc. 1999; 39: 375-377 (Besylate)
Azathioprine	Ora 50mg/ml	30	PI	CYTO precautions sugar free	Am J Health-Syst Pharm. 1996; 53: 1944-9
Baclofen	Ora 10mg/ml	30	SS	sugar free	Am J Health-Syst Pharm. 1996; 53: 2179-84
Carbidopa/Levodopa (Sinemet)	Ora 1.25/5mg/ml	30	SS		Sick Kids Formulary, Toronto, Canada
Carvedilol	Ora 1mg/ml	30	PI		Sick Kids Formulary. Toronto, Canada (modified)
Clopidogrel (Apo brand)	Ora 5mg/ml	30	S		Am J Health Syst Pharm. 2010 April 1:67(7):559-61
Clozapine (Clozaril only)	Ora 20mg/ml	30 RT	PI	sugar free	Can J Hosp Pharm 2005; 58: 279-84
Diltiazem	Ora 12mg/ml	30	FS	sugar free	Ann Pharmacother 2000; 34: 848-50
Dipyridamole	Ora 10mg/ml	30	PI	sugar free	Am J Health-Syst Pharm. 1996; 53: 2179-84
Domperidone	Ora 1mg/ml	30	PI	sugar free	IJPC 2006; 10(1): 61
Enalapril	Ora 1mg/ml	30	SPS	sugar free	Am J Health-Syst Pharm. 1998; 55: 1915-20
Gabapentin	Ora 100mg/ml	30	FS		Pediatr Neurol 1999 Mar; 20(3):195-7. Sick Kids
Hydrocortisone	Ora 1mg/ml	30	PI		Sick Kids Formulary, Toronto, Canada
Labetalol	Ora 10mg/ml		SPS		Am J Health-Syst Pharm. 1996; 53: 2304-9. Concentration adapted.
Metoprolol tartrate	Ora 10mg/ml	30	FS	sugar free	Am J Health-Syst Pharm. 1996; 53 : 2304-9 (tartrate)
Nitrofurantoin	Ora 10mg/ml	30	VSS		Can J Hosp Pharm. 2006; 59:29-33. Sick Kids Toronto
Pyrazinamide	Ora 100mg/ml		S 1:67		Am J Health-Syst Pharm. 1998; 55: 1804-9 Adapted from Sick Kids formulation. Toronto, Canada. Additional formulas on D.Woods eMixt and Paddock labs Secundum Artem Vol 6. No2
Rifabutin	Ora 20mg/ml	30	SS		Am J Health-Syst Pharm. 1999; 56: 333-6
Sildenafil	Ora 2mg/ml	30	VSS		Am J Health-Syst. Pharm. 2006; 63: 254-7
Sotalol	Ora 5mg/ml	30	FS	sugar free	IJPC 2005; Vol.9, No.5:402-6 Sick Kids Formulary, Toronto, Canada
Sulfasalazine	Ora 100mg/ml	30	PI		Can J Hosp Pharm. 2006; 59: 194-200
Tacrolimus	Ora/Syrup 1mg/ml ADHB only for transplant patients	30	Insol	Stability/precautions not appropriate for Community	Am J Health-Syst Pharm. 1997; 54: 178-80 Bone Marrow Transplant. 2006 April; 37 (8): 781-4
Terbinafine	Ora 25mg/ml	30	VSS		Am J Health-Syst Pharm. 1999; 56: 243-5
Ursodeoxycholic acid	Ora 50mg/ml	30	PI	Drug needs HEC. sugar free	Am J Health-Syst Pharm. 1997; 54: 1401-4 Sick Kids Formulary, Toronto, Canada
Valganciclovir	Ora 60mg/ml DCS Hospital only	30	S 70mg/ml	CYTO precautions. DCS list	Griener et al. Am J Health-Syst Pharm 2003; 60: 687-90
Verapamil	Ora 50mg/ml	30	S	sugar free	Am J Health-Syst Pharm. 1996; 53: 2304-9

Disclaimer: This information has been collated to provide guidance and standardised formulations for New Zealand pharmacists. Please note brand changes may impact on the formulation provided. Do not substitute different brands without confirming if this is appropriate. Information was considered accurate at the time of publication and may change as a result of more recent medical developments.