1 PHOXILIUM 1.2MMOL/L, PHOSPHATE (solution, dialysis)

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Phoxilium 1.2mmol/L phosphate solution for haemodialysis and haemofiltration consists of a mixture of the following six active ingredients: Calcium chloride dihydrate, Magnesium chloride hexahydrate, Sodium bicarbonate, Sodium chloride, Potassium chloride and Dibasic sodium phosphate dihydrate.

Phoxilium 1.2mmol/L phosphate solution for haemodialysis and haemofiltration is clear and colourless when reconstituted. It is packaged in a two-compartment bag containing a small (250mL) and a large (4750mL) compartment. The final reconstituted solution is obtained after opening the peel seal and mixing both solutions.

Before reconstitution

1000mL of solution (small compartment A) contains: ***Active substances***	
Calcium chloride dihydrate Magnesium chloride hexahydrate	3.68g 2.44g
1000mL of solution (large compartment B) contains: ***Active substances***	
Sodium chloride Sodium carbonate Potassium chloride Disodium sodium phosphate dihydrate	6.44g 2.92g 0.314g 0.225g

After reconstitution

1000mL of the reconstituted solution contains:			
Active substances		***mmol/L***	***mEq/L***
Sodium	Na^+	140	140
Potassium	K^+	4.0	4.0
Calcium	Ca^{2+}	1.25	2.5
Magnesium	Mg^{2+}	0.6	1.2
Chloride	Cl^-	115.9	115.9
Hydrogen phosphate	HPO_4^{2-}	1.20	2.4
Hydrogen carbonate	HCO_3^-	30	30

Each litre of the final reconstituted solution corresponds to 50mL of solution A & 950mL of solution B.

pH of the reconstituted solution: 7.0 – 8.5.
Theoretical osmolarity: 293mOsm/L.

For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Solution, dialysis.

Phoxilium 1.2mmol/L phosphate solution is clear and colourless when reconstituted as a solution.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Phoxilium 1.2mmol/L phosphate solution is used for CRRT (Continuous Renal Replacement Therapy) in critically ill patients with ARF (Acute Renal Failure) when pH and kalaemia have been restored to normal and when the patients need phosphate supplementation for loss of phosphate in the ultrafiltrate or to the dialysate during CRRT.

Phoxilium 1.2mmol/L phosphate solution may also be used in case of drug poisoning or intoxications when the poisons are dialysable or pass through the membrane.

Phoxilium 1.2mmol/L phosphate solution is indicated for use in patients with normal kalaemia and normal or hypophosphataemia.

4.2 Dose and method of administration

Posology

Phoxilium 1.2mmol/L phosphate solution is used as a substitution solution and/or dialysate. The rate and volume of Phoxilium 1.2mmol/L phosphate solution administered depends on the blood concentration of phosphate and other electrolytes, acid-base balance, target fluid balance and overall clinical condition of the patient. The volume of substitution solution and/or dialysate to be administered will also depend on the desired intensity. Administration (dose, infusion rate and cumulative volume) of Phoxilium 1.2mmol/L phosphate solution should be established by a physician.

The range of flow rates for the replacement solution in haemofiltration and haemodiafiltration are:

Adult and adolescents:	500 – 3000mL/hour
Neonates, infants, children:	15 – 35mL/kg/hour.

The range of flow rates for the dialysis solution (dialysate) in continuous haemodialysis and continuous haemodiafiltration are:

Adult and adolescents:	500 – 2500mL/hour
Neonates, infants, children:	15 – 30mL/kg/hour.

Commonly used flow rates in adults are about 2000mL/h which correspond to a daily replacement fluid volume of approximately 48L.

Phoxilium 1.2mmol/L phosphate solution, when used as a substitution solution is administered into the extracorporeal circuit before (pre-dilution) or after (post-dilution) the haemofilter or haemodiafilter through the replacement pump of the CRRT device. Use only with appropriate extracorporal renal replacement equipment.

4.3 Contraindications

Phoxilium 1.2mmol/L phosphate solution is contraindicated in patients with hypersensitivity to the active substances or to any of the excipients listed in section 6.1.

Solution dependent contraindications:

- Hyperkalaemia,
- Metabolic alkalosis,
- Hyperphosphataemia.

Haemofiltration/haemodialysis dependent contraindications:

- Renal failure with pronounced hypercatabolism, if the uraemic symptoms cannot be corrected with haemofiltration or haemodiafiltration,
- Insufficient arterial pressure in the vascular access,
- Systemic anticoagulation (high risk of haemorrhage).

4.4 Special warnings and precautions for use

The solution should be used only by, or under the direction of, a physician competent in renal failure treatments using haemofiltration, and continuous haemodialysis.

Phoxilium 1.2mmol/L phosphate solution is a phosphate and potassium-containing solution. Review the components of this solution before use, see section 2, 5.1 and 6.1. Hyperphosphataemia or hyperkalaemia may occur after treatment is initiated. Decrease the infusion rate and confirm that the desired phosphate concentration or potassium concentration is achieved. If hyperphosphataemia or hyperkalemia does not resolve, stop administration promptly, see section 4.3.

Electrolyte and blood acid/base parameters should be monitored regularly in patients treated with Phoxilium 1.2mmol/L phosphate solution. The phosphate solution contains hydrogen phosphate, a weak acid that can influence the patient's acid/base balance. If metabolic acidosis develops or worsens during therapy with Phoxilium 1.2mmol/L phosphate solution, the infusion rate may need to be decreased or its administration stopped.

Because Phoxilium 1.2mmol/L phosphate solution contains no glucose, administration of Phoxilium 1.2mmol/L phosphate solution may lead to hypoglycaemia. Blood glucose levels should be monitored regularly. If hypoglycaemia develops, use of a glucose-containing solution should be considered. Other corrective measures may be necessary to maintain desired glycaemic control.

Check to make sure that the solutions are clear and that all seals are intact before mixing. Carefully follow the Phoxilium 1.2mmol/L phosphate solution Instructions for Use.

The solution A must be mixed with the solution B before use to obtain the reconstituted solution suitable for haemofiltration or continuous haemodialysis.

Do not administer the solution unless it is clear. Aseptic techniques must be used during connection/disconnection of the line sets to the Phoxilium 1.2mmol/L phosphate solution container.

Use in one patient on one occasion only.

Use only with an appropriate extracorporal replacement equipment.

Special precautions for use

Heating of this solution to body temperature (37°C) must be carefully controlled, only dry heat should be used. Warming of Phoxilium 1.2mmol/L phosphate solution should be done before reconstitution with dry heat only (e.g. heating pad, warming plate). Solutions should not be heated in water or in microwave oven due to the potential for patient injury or discomfort. It should also be visually verified that the solution is clear and without particles prior to administration. If not, discard and do not use the solution.

Haemodynamic status, fluid balance, electrolyte and acid-base balance should be closely monitored throughout the procedure including all fluid inputs and outputs, even those not directly related to CRRT.

In case of hypervolaemia, the net ultrafiltration rate prescribed for the CRRT device can be increased &/or the rate of administration of solutions other than replacement fluid &/or dialysate can be reduced.

For hypovolaemia, the net ultrafiltration rate prescribed for the CRRT device can be reduced and/or the rate of administration of solutions other than replacement and/or dialysate can be increased.

Blood calcium levels should be monitored regularly in patients with metabolic alkalosis since this condition may potentiate hypocalcaemia.

In case of fluid imbalance (i.e. cardiac failure, head trauma), the clinical condition of the patient must be carefully monitored until restoration of normal fluid balance.

The use of contaminated haemofiltration/haemodialysis solutions may cause sepsis and shock.

Paediatric use
There are no specific warnings and precautions when using this medicine for children.

There are no specific studies with Phoxilium 1.2mmol/L phosphate solutiofor effects on paediatric population. The ingredients are present at concentrations similar to physiological plasma levels. Haemodynamic status, fluid balance, electrolyte and acid-base balance must be closely monitored.

Use in the elderly
There are no specific studies with Phoxilium 1.2mmol/L phosphate solution for effects on elderly. However, since the ingredients are pharmacologically inactive and present at concentrations similar to physiological plasma levels no adverse effects are expected.

Effect on laboratory tests
Changes in laboratory tests may occur – in particular potassium, phosphate, calcium, magnesium and acid base balance – as a result of this medicine, the renal replacement therapy used, or patient characteristics. Monitoring is recommended.

4.5 Interaction with other medicines and other forms of interaction

The blood concentration of filterable/dialysable medicines may be reduced during treatment due to their removal by the haemodialyser, haemofilter or haemodiafilter. Corresponding corrective therapy should be instituted, if necessary, to establish the correct doses for medicines removed during procedures.

Interactions with other medicines can be avoided by correct dosage of the solution for haemofiltration and haemodialysis.

The following are examples of potential medicinal interactions with Phoxilium 1.2mmol/L phosphate solution:

- Additional sources of phosphate (e.g., hyperalimentation fluid) may influence serum phosphate concentration and may increase the risk of hyperphosphataemia,
- Vitamin D and other vitamin D analogues, as well as medicinal products containing calcium, (e.g. calcium carbonate as phosphate binder, calcium chloride or calcium gluconate used for maintenance of calcium homeostasis in CRRT patients receiving citrate anticoagulation), can increase the risk of hypercalcaemia,

- Additional sodium bicarbonate (or buffer source) administered in the substitution fluid or in other fluids may increase the risk of metabolic alkalosis,
- When citrate is used as an anticoagulant, it contributes to the overall buffer load and can reduce plasma calcium levels.

4.6 Fertility, pregnancy and lactation

Fertility

There are no specific studies with **Phoxilium** 1.2mmol/L phosphate solution for effects on fertility. However, since the component electrolytes are present at concentrations similar to physiological plasma levels no adverse effects on fertility are anticipated.

Pregnancy

There are no documented clinical data on the use of **Phoxilium** 1.2mmol/L phosphate solution in pregnant women. The prescriber should consider the benefit/risk relationship before administering **Phoxilium** 1.2mmol/L phosphate solution to pregnant women.

Breast-feeding

There are no documented clinical data on the use of **Phoxilium** 1.2mmol/L phosphate solution in breast-feeding women. The prescriber should consider the benefit/risk relationship before administering **Phoxilium** 1.2mmol/L phosphate solution to breast-feeding women.

4.7 Effects on ability to drive and use machines

The effects of this medicine on a person's ability to drive and use machines were not assessed as part of its registration.

4.8 Undesirable effects

Undesirable effects can result from the solution used or the treatment (see below for post-marketing adverse reactions and class reactions).

Post-marketing adverse reactions

The following adverse reactions have been reported in the post-marketing experience:

- Metabolism *and nutrition disorders:* Metabolic acidosis, hyperphosphataemia

Other reactions (Class reactions)

- Hypotension,
- Acid-base balance disorders,
- Electrolyte imbalance,
- Fluid imbalance.

Some undesirable effects such as nausea, vomiting, muscle cramps and hypotension related to the treatments (haemofiltration and haemodialysis) can also occur.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Healthcare professionals are asked to report any suspected adverse reactions https://nzphvc.otago.ac.nz/reporting/

4.9 Overdose

Overdose with **Phoxilium** 1.2mmol/L phosphate solution, should not occur if the procedure is carried out correctly and the fluid balance, electrolyte and acid-base balance of the patient are carefully monitored by trained medical personnel.

Electrolyte imbalance and acid-base balance abnormalities (e.g. metabolic acidosis and/or hyperphosphataemia) may occur in the event of an overdose. Stop administration promptly. There is no specific antidote for overdose. The risk can be minimised by close monitoring during treatment.

Overdose resulting in fluid overload can occur in patients with acute or chronic renal failure. Continuation of treatment with haemofiltration or haemodiafiltration can be used to increase the volume of fluid removal by means of ultrafiltration, to restore normal fluid and thus correct the overdose. Thus in cases of hypervolaemia, the net ultrafiltration rate prescribed for the CRRT device can be increased and/or the rate of administration of solutions other than replacement fluid and/or dialysate can be reduced. In cases of hypovolaemia, the net ultrafiltration rate prescribed for the CRRT device can be reduced and/or the rate of administration of solutions other than replacement fluid and/or dialysate can be increased.

Phoxilium 1.2mmol/L phosphate solution overdose can lead to severe clinical conditions, such as congestive heart failure, electrolyte or acid-base disturbances.

For advice on the management of overdose please contact the National Poisons Centre on phone number: 0800 764 766 [0800 POISON] in New Zealand (or 131126 in Australia).

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Haemofiltrates.
ATC code: B05ZB.

Phoxilium 1.2mmol/L phosphate solution for haemodialysis and haemofiltration contains sodium, calcium, magnesium, potassium, phosphate and chloride ions at concentrations similar to physiological levels in plasma. The electrolytes Na^+, Ca^{2+}, Mg^{2+}, K^+, HPO_4^{2-}, Cl^- and bicarbonate are essential for the maintenance and correction of fluids and electrolyte homeostasis (blood volume, osmotic equilibrium, acid-base balance). The pharmacodynamic effects of the haemodialysis and haemofiltration solution result from the additive physiological effects of the well balanced single components.

Phoxilium 1.2mmol/L phosphate solution is used to replace water and electrolytes removed during haemofiltration and haemodiafiltration or to serve as a suitable dialysis solution for use during continuous haemodiafiltration or continuous haemodialysis.

Bicarbonate is used as an alkalising buffer.

Physiochemical properties
Calcium chloride dihydrate
Molecular formula: $CaCl_2 \cdot 2H_2O$
Molecular Weight: 147.0g/mol
CAS No.: 10035-04-8
Appearance: a white or almost white crystalline powder.
Solubility: freely soluble in water, and soluble in ethanol (96%).

Magnesium chloride hexahydrate
Molecular formula: $MgCl_2 \cdot 6H_2O$
Molecular Weight: 203.3g/mol
CAS No.: 7791-18-6
Appearance: colourless crystals.
Solubility: very soluble in water, & freely soluble in alcohol.

Sodium chloride
Molecular formula: NaCl
Molecular Weight: 58.44g/mol
CAS No.: 7647-14-5
Appearance: a white or almost white crystalline powder or is presented as colourless crystals, white or almost white pearls.
Solubility: freely soluble in water, and practically insoluble in ethanol.

Sodium Bicarbonate
Molecular formula: $NaHCO_3$
Molecular Weight: 84.0g/mol
CAS No.: 144-55-8
Appearance: white or almost white, crystalline powder.
Solubility: soluble in water, and practically insoluble in ethanol (96%).

Potassium Chloride
Molecular formula: KCl
Molecular Weight: 74.6g/mol
CAS No.: 7447-40-7
Appearance: White or almost white, crystalline powder or colourless crystals.
Solubility: Freely soluble in water, practically insoluble in anhydrous ethanol.

Dibasic Sodium Phosphate Dihydrate
Molecular formula: $NaH_2PO_4 \cdot 2(H \cdot O)$
Molecular Weight: 178.0g/mol
CAS No.: 13472-35-0
Appearance: Colourless crystals,white or almost white powder.
Solubility: soluble in water & practically insoluble in ethanol (96%).

Clinical trials
No clinical trials were conducted during the development of Phoxilium 1.2mmol/L phosphate solution.

Phoxilium 1.2mmol/L phosphate solution has been used as a bicarbonate-buffered solution in renal replacement therapy where phosphate supplementation is required and pH and potassium levels are normal.

Broman *et al.* have conducted two retrospective reviews of Phoxilium 1.2mmol/L phosphate solution. The first study report is a retrospective study with three groups each containing 14 critically ill AKI patients. With CVVHDF as the modality used for all 3 groups, the study compared treatment with:

- Group 1: Hemosol B0 solution as both replacement fluid and dialysate;
- Group 2: Phoxilium 1.2mmol/L phosphate solution as dialysate and Hemosol B0 solution as replacement fluid; and
- Group 3: Phoxilium 1.2mmol/L phosphate solution as both dialysate and replacement fluid.

With respect to acid/base balance, mean pH normalized rapidly in all three groups and, likewise, the mean serum bicarbonate increased consistently during treatment. Nevertheless, the mean serum bicarbonate value during treatment in Group 3 (22mEq/L) was at the lower end of the normal range or just below the lower limit of normal for most laboratories. Moreover, the mean serum bicarbonate values during treatment (Group 1, 24mEq/L; Group 2, 23mEq/L; and Group 3, 22mEq/L) were borderline significantly different (p = 0.045).

The second Broman *et al* study is also a retrospective analysis of the records of 112 patients treated with CVVHDF. Using **Hemosol B0** solution exclusively as the replacement fluid, these investigators compared treatment with either the European formulation of **Phoxilium** 1.2mmol/L phosphate solution (N = 76) or **Hemosol B0** (N = 36) as a dialysate. In this larger population, the mean serum bicarbonate during treatment was in the normal range for both groups and did not significantly differ, although being somewhat higher in the control group compared to the phosphate group. The development of metabolic acidosis as an adverse event (pH < 7.3 and serum bicarbonate < 24mmol/L) was more frequent in the **Hemosol B0** group (66.7%) than the **Phoxilium** 1.2mmol/L phosphate solution group (55.4%). The clinical relevance of this finding cannot be determined due to the different number of patients in the two treatment groups.

Chua *et al.* reported in 2012 a retrospective comparison of biochemical changes in 15 critically ill patients receiving CVVH treatment with sequential use of a non- phosphate containing solution (**Accusol**) and a phosphate containing solution (**Phoxilium**). Respective serum biochemistry after 36 to 42h of **Accusol** vs. **Phoxilium** (expressed in median (interquartile range, IQR)) were: phosphate 1.02 (0.82 - 1.15) vs. 1.44 (1.23 - 1.78) mmol/L, ionized calcium 1.28 (1.22 - 1.32) vs. 1.12 (1.06 - 1.21) mol/L, pH 7.39 (7.34 - 7.44) vs. 7.38 (7.28 - 7.42). Although the changes in pH were statistically not significant the authors concluded: "**Phoxilium** versus **Accusol** use during CVVH effectively prevented hypophosphataemia but contributed to mild hyperphosphataemia, and is associated with relative hypocalcaemia and metabolic acidosis." The authors acknowledged that because of the small patient number they were "unable to examine in detail predictors for iatrogenic hyperphosphataemia with **Phoxilium**".

5.2 Pharmacokinetic properties

The distribution of electrolytes and bicarbonate in the body is determined by the patient's clinical condition, metabolic status, residual renal function, and type of renal replacement therapy instituted. The elimination of water, electrolytes and buffer depend on the patient's electrolyte and acid-base balance, metabolic status, residual renal function, type of renal replacement therapy, and ongoing physiologic losses through intestinal, respiratory and cutaneous routes.

No pharmacokinetic interactions between the individual ingredients of **Phoxilium** 1.2mmol/L phosphate solution are known.

5.3 Preclinical safety data

Genotoxicity

There are no specific studies with **Phoxilium** 1.2mmol/L phosphate solution for effects on genotoxicity. Given the nature of its components, **Phoxilium** 1.2mmol/L phosphate solution is not considered to pose a genotoxic hazard.

Carcinogenicity

There are no specific studies with **Phoxilium** 1.2mmol/L phosphate solution for effects on carcinogenicity. Given the nature of its components, **Phoxilium** 1.2mmol/L phosphate solution is not considered to pose a carcinogenic hazard.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Small compartment A: Water for injections
Hydrochloric acid (for pH adjustment)
Large compartment B: Water for injections
Carbon dioxide (for pH adjustment).

6.2 Incompatibilities

Incompatibilities were either not assessed or not identified as part of the registration of this medicine.

6.3 Shelf life

Before reconstitution
18 months from date of manufacture.
The expiry date can be found on the packaging.

After reconstitution
From a chemical point of view, as bicarbonate is present, the reconstituted solution should be used immediately. Other in-use storage times and conditions prior to use are the responsibility of the user and should not be longer than 24 hours including the duration of the treatment.

6.4 Special precautions for storage

Store at or below 30°C. Do not refrigerate or freeze.

6.5 Nature and contents of container

Phoxilium 1.2mmol/L phosphate solution is provided in a polyolefin container. The container is made up of a small compartment and a large compartment. The two compartments are separated by a peel seal.

The large compartment B is fitted with an injection connector (or spike connector) made of polycarbonate (PC), which is closed with a rubber disc covered by a cap as well as a luer connector (PC) with a frangible pin (PC) or a valve made of silicone rubber for the connection of the bag with a suitable replacement solution line or dialysis line.

The bag is overwrapped with a transparent overwrap made of multilayer polymer film.

Each two-compartment bag contains 5000mL made up as 250mL compartment A and 4750mL compartment B.

Package size: 5000mL.

6.6 Special precautions for disposal and other handling

Disposal
Any unused product or waste material should be disposed of in accordance with local requirements.

Other handling
The solution in small compartment A is added to the solution in large compartment B after opening the peel seal immediately before use. The reconstituted solution should be clear and colourless.

A package leaflet with detailed instructions for use is enclosed in the box.

Aseptic techniques shall be used throughout the handling and administration to the patient.

Phoxilium 1.2mmol/L phosphate solution should be inspected visually for particulate matter and discolouration prior to administration. Use only if the solution is clear and overwrap is undamaged. All seals must be intact. Press bag firmly to test for any leakage. If leakage is discovered, discard the solution immediately since sterility can no longer be assured.

The large compartment B is fitted with an injection port for the possible addition of other necessary medicines after reconstitution of the solution. Additives may be incompatible. The instructions for use of the medication to be added and other relevant literature must be consulted. After addition, if there is a colour change and/or the appearance of precipitates, insoluble complexes or crystals, do not use. It is the responsibility of the physician to judge the compatibility of an additive medication with Phoxilium 1.2mmol/L phosphate solution by checking for eventual colour change and/or eventual precipitation, insoluble complexes or crystals.

Before adding a medication, verify that it is soluble and stable in water at the pH of Phoxilium 1.2mmol/L phosphate solution (pH of reconstituted solution is 7.0 to 8.5).

The compatible medication must be added to the reconstituted solution. Medication should only be added to the solution under the responsibility of a physician in the following way: Remove any fluid from the injection port, hold the bag upside down, insert the medicine through the injection port and mix thoroughly.

The introduction and mixing of additives must always be performed prior to connecting the solution bag to the extracorporeal circuit.

The reconstituted solution must be administered immediately.

Instructions for use for polyolefin bag with a peel seal separating the two compartments

1. Immediately before use remove the overwrap from the bag and mix the solutions in the two different compartments. Open the seal by holding the small compartment with both hands and squeeze it until an opening is created in the peel seal between the two compartments.
2. Push with both hands on the large compartment until the peel seal between the two compartments is entirely open.
3. Secure complete mixing of the solution by shaking the bag gently. The solution is now ready for use, and can be hung on the equipment.
4. The dialysis, or replacement line, may be connected to either of the two access ports.

Instructions for handling access ports

The Polyolefin bag is supplied with 2 access ports; an *injection* port and a *luer connector* port (the luer connector will be fitted with either a frangible pin or a valve).

1. *The Polyolefin bag fitted with the injection port:* First remove the snap-off cap, then introduce the spike through the rubber septum. Verify that the fluid is flowing freely.
2. *The Polyolefin bag fitted with the luer connector consisting of a frangible pin:* Remove the cap and connect the male luer lock on the dialysis, or replacement line, to the female luer receptor on the bag; tighten. Using thumb and fingers, break the coloured frangible pin at its base, and move it back and forth. Do not use a tool. Verify that the pin is completely separated and that the fluid is flowing freely. The pin will remain in the luer port during the treatment.
3. *The Polyolefin bag fitted with the luer connector consisting of a valve:* Remove the cap with a twist and pull motion, and connect the male luer lock on the dialysis, or replacement line, to the female luer receptor on the bag using a push and twist motion. Ensure that the connection is fully seated and tighten. The connector is now open. Verify that the fluid is flowing freely. When the dialysis

or replacement line is disconnected from the luer connector, the connector will close and the flow of the solution will stop. The luer port is a needle-less and swabbable port.

4. The reconstituted solution should be used immediately after removal of the overwrap and after addition of solution A to solution B. If not used immediately, the reconstituted solution must be used within 24 hours, including the duration of the treatment.

The product is for use in one patient on one occasion only. Discard any residue immediately after use. Do not use if container is damaged or if solution is not clear.

7 MEDICINE SCHEDULE

General Sale Medicine.

8 SPONSOR

Phoxilium 1.2mmol/L phosphate solution is distributed in New Zealand by:

Baxter Healthcare Ltd
33 Vestey Drive
Mt Wellington
Auckland 1060.

Baxter Healthcare Ltd
PO Box 14 062
Panmure
Auckland 1741

Phone (09) 574 2400.

Phoxilium 1.2mmol/L phosphate solution is distributed in Australia by:

Baxter Healthcare Pty Ltd
1 Baxter Drive
Old Toongabbie, NSW 2146.

9 DATE OF FIRST APPROVAL

Date of publication in the New Zealand Gazette of consent to distribute the medicine:
30 January 2014.

10 DATE OF REVISION OF THE TEXT

14 August 2018.

SUMMARY TABLE OF CHANGES

Section changed	Summary of new information
All	Formatting, numbering, spacing, spelling, grammar, table references, headings: reviewed and standardized.
3	Pharmaceutical form section simplified.
4.2	Method of administration removed repeated information.
4.4	Repeated information relating to in-use storage time removed. Paediatric use and Use in elderly moved to this section.
4.7	Text updated to align with source document.
5	Physiochemical properties simplified.
5.3	Preclinical safety data split under the two required headings: Genotoxicity and Carcinogenicity.
6.2	Text updated to align with source document.
6.3	Comment added that: Expiry date can be found on packaging.
6.5	Removed comment that not all pack sizes maybe marketed.
6.6	Disposal information moved to beginning of section. Introduction of new safety information: The introduction and mixing of additives must always be performed prior to connecting the solution bag to the extracorporeal circuit.
References	References removed.

Based on Australian PI amended July 2018017.

Please refer to the Medsafe website (www.medsafe.govt.nz) for most recent data sheet.

Phoxilium, Hemosol B0 and Accusol are trademarks of Baxter International Inc or its subsidiaries.