

Shortage of Supply

Sodium Bicarbonate Polyfusors (Fresenius Kabi) all strengths

Description of product affected

Sodium bicarbonate for intravenous infusion is licensed for the treatment of metabolic acidosis and rapid urine alkalinisation. The volume, strength and rate of infusion will depend upon the requirements of individual patients. In less urgent forms of metabolic acidosis, an average dose for adults and older children is 2-5 mmol of bicarbonate per kg bodyweight, given over 4-8 hours. Subsequent doses should be adjusted to the individual patients' requirements.

Alternative agents

Sodium bicarbonate 8.4% in 100ml bottles (B Braun) is available and may be diluted to prepare lower strength solutions.

To prepare a solution of sodium bicarbonate 1.26%:

1. Add 88mL of sodium bicarbonate 8.4% to a bag of Glucose 5% 500mL (final volume in bag: 588mL).
2. Mix well by inverting the bag five times.
3. Label bag stating strength and final volume i.e. sodium bicarbonate 1.26%, volume 588mL.
4. Do not mix any other drugs or fluids with sodium bicarbonate solution.
5. Infuse the dose prescribed and discard the rest.

The resulting composition of the prepared solution as compared with 1.26% Polyfusor is as follows:

Product	Volume	Content per 100mL			TOTAL content per bag		
		Sodium bicarbonate (g)	Sodium (mmol)	Bicarbonate (mmol)	Sodium bicarbonate (g)	Sodium (mmol)	Bicarbonate (mmol)
Sodium bicarbonate 1.26% (Polyfusor)	500mL	1.26	15	15	6.3	75	75
Prepared solution[†]							
Sodium bicarbonate 1.26%	588mL	1.26	14.97	14.97	7.4	88.0	88.0

Please refer to Medusa (Injectable Medicines Guide) for full administration details. Medusa is available via the Trust intranet under 'Tools'.

Sodium bicarbonate infusions prepared in glucose 5% have a higher osmolarity (540-570 mOsmol/L) than the Polyfusor solution and may be more irritant to the vein; therefore it should preferably be administered via a large vein.

Alternatively, sodium bicarbonate can be diluted in sodium chloride 0.9% but the increase in sodium content should be borne in mind as sodium chloride 0.9% 500mL contains 77mmol of sodium and 77mmol of chloride. Avoid diluting with sodium chloride 0.9% in renal impairment due to risk of hypernatremia.

For Further information please contact your ward pharmacist.

References

Specialist Pharmacy Service. 'Shortage of Sodium Bicarbonate Polyfusors (Fresenius Kabi)- all strengths'. Published 25th March 2020, updated 11th May 2020. London and South East Regional Medicines Information. Available at: <https://www.sps.nhs.uk/articles/shortage-of-sodium-bicarbonate-polyfusors-fresenius-kabi-all-strengths/>

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