HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use NORMOCARB HF™ safely and effectively. See full prescribing information for NORMOCARB HF.

NORMOCARB HF (sodium chloride, magnesium chloride hexahydrate, and sodium bicarbonate) injection, for intravenous use

Initial U.S. Approval: 2006

----------INDICATIONS AND USAGE----------

- NORMOCARB HF is an electrolyte concentrate indicated for use in pediatric and adult patients as a replacement solution in Continuous Renal Replacement Therapy (CRRT) to replace water and to correct electrolytes and acid-base imbalance. (1)

----------DOSAGE AND ADMINISTRATION ----------

- Dilute Before Use. Dilute only with Sterile Water for Injection. (2.1)
- Dilute one 240 mL vial of NORMOCARB HF in 3 L of Sterile Water to make 3.24 L of infusate solution for injection. (2.1)
- Individualize Treatment: Pre- or Post-Filter: Adjust the volume of diluted solution administered based on the fluid balance of the patient, target fluid balance, body weight and the amount of fluid removed from the patient's circulation during the hemofiltration process. When administered post-filter, the replacement rate should not be greater than one-third of the blood flow rate. (2.2)
- Diluted Solutions when prepared as directed contain the following component concentrations: (2.3)

	Diluted NORMOCARB HF 25	Diluted NORMOCARB HF 35
Component	mEq per Liter	mEq per Liter
Sodium (Na)	140.0	140.0
Magnesium (Mg)	1.5 (0.75 mMol per L)	1.5 (0.75 mMol per L)
Chloride (Cl)	116.5	106.5
Bicarbonate (HCO_3)	25.0	35.0
Total Anions	141.5	141.5
Total Cations	141.5	141.5
Theoretical Osmolarity	283 mOsm per Liter	283 mOsm per Liter
pH	8.55 ± 0.25	8.55 ± 0.25

----------DOSAGE FORMS AND STRENGTHS----------

- NORMOCARB HF 25 and NORMOCARB HF 35 are electrolyte concentrates that differ in bicarbonate concentrations (3)

----------CONTRAINDICATIONS----------

None. (4)

----------WARNINGS AND PRECAUTIONS----------

- Serious electrolyte, acid-base, glucose and fluid imbalances may occur. Monitor hemodynamic status, fluid, electrolyte, glucose and acid-base balance throughout procedure. (5.1)

----------ADVERSE REACTIONS----------

To report SUSPECTED ADVERSE REACTIONS, contact Apotex at 1-800-667-4708 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

Revised: 5/2019

FULL PRESCRIBING INFORMATION: CONTENTS *

* Sections or subsections omitted from the full prescribing information are not listed.

FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

NORMOCARB HF™, after dilution, is indicated in adult and pediatric patients for use as a replacement solution in Continuous Renal Replacement Therapy (CRRT) to replace water and to correct electrolytes and acid-base imbalance.

2 DOSAGE AND ADMINISTRATION

2.1 Important Preparation Information

NORMOCARB HF MUST BE DILUTED BEFORE USE. Dilute only with Sterile Water for Injection.
For dilution, add one 240 mL vial of NORMOCARB HF to 3 Liters of Sterile Water for Injection to make 3.24 Liters of infusate solution. Shake to mix by rocking or rolling the bag and contents thoroughly. Additives can be introduced after initial dilution *[see Dosage and Administration (2.4)].*

2.2 Individualization of Treatment

Pre- or Post-Filter: The volume of solution (diluted NORMOCARB HF™) administered depends upon the fluid balance of the individual patient, the target fluid balance to be achieved, the body weight and the amount of fluid removed from the patient's circulation during the hemofiltration process. When administered post-filter, the replacement rate should not be greater than one third of the blood flow rate; e.g., for blood flow of 100 mL per min, equivalent to 6000 mL per hour, post-filter replacement rate should not exceed 2000 mL per hour.

2.3 Administration

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit. Do not use NORMOCARB HF if a precipitate has been formed or if container seals have been damaged.

Table 1 describes the components of diluted NORMOCARB HF 25 and NORMOCARB HF 35 solutions when prepared as directed.

Table 1. Components of Diluted NORMOCARB HF 25 and NORMOCARB HF 35

	Diluted NORMOCARB HF 25	Diluted NORMOCARB HF 35
Component	mEq per Liter	mEq per Liter
Sodium (Na)	140.0	140.0
Magnesium (Mg)	1.5 (0.75 mMol per L)	1.5 (0.75 mMol per L)
Chloride (Cl)	116.5	106.5
Bicarbonate (HCO_3)	25.0	35.0
Total Anions	141.5	141.5
Total Cations	141.5	141.5
Theoretical Osmolarity	283 mOsm per Liter	283 mOsm per Liter
pH	8.55 ± 0.25	8.55 ± 0.25

Use diluted NORMOCARB HF within 24 hours. It may be stored at normal room temperature or refrigerated (2°C to 30°C). Do not freeze infusate solution or expose to excessive heat.

2.4 Additives

When introducing additives, use aseptic techniques.

Potassium: Potassium chloride up to 4 mEq per Liter may be added to the diluted solution.

Calcium: Calcium chloride up to 1.25 mMol per Liter (2.5 mEq per Liter) may be added to the diluted solution.

Glucose: Up to 12 mL of D50W may be added to the diluted solution to provide a concentration of up to 10.2 mMol per Liter of dextrose.

Phosphate: Potassium phosphate up to 1.2 mMol per Liter (2.4 mEq per Liter) may be added to the diluted solution. The total potassium concentration should not exceed 4 mEq per Liter.

Drugs should not be added to NORMOCARB HF™.

3 DOSAGE FORMS AND STRENGTHS

NORMOCARB HF is a Sterile Electrolyte Concentrate for Infusion. NORMOCARB HF comes in two strengths that differ in bicarbonate concentration.

Undiluted NORMOCARB HF 25 contains 90.73 g per Liter sodium chloride (NaCl), 2.06 g per Liter magnesium chloride hexahydrate ($MgCl_2 \cdot 6H_2O$) and 28.35 g per Liter sodium bicarbonate ($NaHCO_3$) in water for injection.

Undiluted NORMOCARB HF 35 contains 82.84 g per Liter sodium chloride (NaCl), 2.06 g per Liter magnesium chloride hexahydrate ($MgCl_2 \cdot 6H_2O$) and 39.70 g per Liter sodium bicarbonate ($NaHCO_3$) in water for injection.

4 CONTRAINDICATIONS

None.

5 WARNINGS AND PRECAUTIONS

5.1 Serious Electrolyte, Acid-base, Glucose and Fluid Imbalances

Fluid imbalance and electrolyte, acid-base, and glucose disturbances can occur during therapy. Monitor the patient's hemodynamic status, and fluid, electrolyte, glucose and acid-base balance throughout the procedure.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

NORMOCARB HF is a pharmacologically inactive solution. While there are no adequate and well-controlled studies in pregnant women, appropriate administration of NORMOCARB HF with monitoring of fluid, electrolyte, acid-base and glucose balance, is not expected to cause fetal harm, or affect reproductive capacity. Animal reproduction studies have not been conducted with NORMOCARB HF™.

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

8.2 Lactation

Risk Summary

The components of NORMOCARB HF are excreted in human milk. Appropriate administration of NORMOCARB HF with monitoring of fluid, electrolyte, acid-base and glucose balance is not expected

to harm a nursing infant.

8.4 Pediatric Use

No adequate and well-controlled studies have been conducted with NORMOCARB HF in adult or pediatric patients. Safety and effectiveness in pediatric patients newborn to 17 years of age were based on eight non-controlled published pediatric studies and one published pediatric scientific literature review. The exact composition of the buffer and electrolytes in the solution during CRRT were not described in adult or pediatric studies; however, plasma electrolyte levels were similar between adults and children.

8.5 Geriatric Use

No adequate and well-controlled studies have been conducted with NORMOCARB HF in elderly patients.

11 DESCRIPTION

NORMOCARB HF is a clear, sterile, nonpyrogenic, electrolyte concentrate used in Continuous Renal Replacement Therapy (CRRT) as a replacement solution in hemofiltration or hemodiafiltration.

Composition

Undiluted NORMOCARB HF 25 contains 90.73 g per Liter sodium chloride (NaCl), 2.06 g per Liter magnesium chloride hexahydrate ($MgCl_2 \cdot 6H_2O$) and 28.35 g per Liter sodium bicarbonate ($NaHCO_3$) in water for injection.

Undiluted NORMOCARB HF 35 contains 82.84 g per Liter sodium chloride (NaCl), 2.06 g per Liter magnesium chloride hexahydrate ($MgCl_2 \cdot 6H_2O$) and 39.70 g per Liter sodium bicarbonate ($NaHCO_3$) in water for injection.

NORMOCARB HF contains no bacteriostatic or antimicrobial agents.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

NORMOCARB HF is a pharmacologically inactive solution. The concentrations of electrolytes are chosen to help to restore plasma levels to physiological concentrations.

NORMOCARB HF is used as replacement solution to replace water and electrolytes removed during hemofiltration and hemodiafiltration.

Bicarbonate in the solution is used as an alkalinizing buffer to normalize acid-base balance.

16 HOW SUPPLIED/STORAGE AND HANDLING

NORMOCARB HF is available as a clear, sterile, nonpyrogenic, bicarbonate infusate concentrate in single-use vials of 240 mL. NORMOCARB HF contains no bacteriostatic or antimicrobial agents.

240 mL vial	NDC
NORMOCARB HF 25	16951-0125-1
NORMOCARB HF 35	16951-0135-1

Storage and Handling

Undiluted NORMOCARB HF should be stored at 20°C to 25°C (68°F to 77°F) [See USP Controlled Room Temperature]. Do not freeze. Do not use if a precipitate has formed or if container seals have been damaged.

Manufactured by:
Apotex Inc.
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Canada M9L 1T9

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DIALYSIS SOLUTIONS INC.