

**Incenter Hemodialysis Policies & Procedures
DaVita Inc.****Policy: 1-03-02**

Printed copies are for reference only. Please refer to the electronic copy for the latest version

**TITLE: TESTING pH AND CONDUCTIVITY OF PROPORTIONED
DIALYSATE AND VERIFICATION OF TEMPERATURE OF
PROPORTIONED DIALYSATE**

PURPOSE: To provide guidance for testing and documenting pH, conductivity and temperature of proportioned dialysate.

POLICY:

1. Trained teammates will test pH and conductivity of final dialysate utilizing appropriate test strips and/or meters prior to each patient treatment.
2. Each facility will maintain a minimum of two (2) approved devices to perform independent pH and conductivity readings of final dialysate.
3. Document results in the electronic treatment record or dialysis delivery system log, as applicable.
4. The acceptable range for machine displayed and final dialysate conductivity is 13 - 15.5 mS. (See step 5 below.) If the physician orders dialysate sodium of 136 or less in specific circumstances, then the acceptable range for final dialysate conductivity is 12.8 – 15.5 mS. If the machine displayed and final dialysate conductivity is not within this range, do not initiate treatment and investigate the reason the values are outside the acceptable range.
5. The final dialysate conductivity should be checked with approved independent meter. Independent meter reading should be ± 0.4 mS of the machine displayed conductivity based on your facility's machine type:
 - Fresenius Machine-TCD
 - B Braun Machine-ENDLF
 - Phoenix Machine-Displayed Conductivity
6. Independent conductivity and pH is required to be performed prior to each treatment.
7. The acceptable range for final dialysate pH is 6.9-7.6. Check independent pH with approved test method for final dialysate.
8. If independent reading results are not within acceptable range, recalibrate meter and retest. If results are still outside acceptable range, do not use the delivery system for patient treatment. Label the delivery system and notify Biomed.

Incenter Hemodialysis Equipment, Water and Testing Devices
Procedure: 2-07-11A
DaVita Inc.

Printed copies are for reference only. Please refer to the electronic copy for the latest version.

**TITLE: NEUTRALIZATION AND DISPOSAL OF RESIDUAL ACID
CONCENTRATE FOR SMALL VOLUMES LESS THAN (<) 5
GALLONS**

Materials required:

- Designated drain
- Water supply to rinse bucket
- 5 gallon bucket with a 3.5 gallon fill line labeled with Hazardous Material Information Guide (HMIG) tag as used with acid concentrates; DO NOT USE LABEL
- Stirrer
- Bicarbonate powder
- PPE-personal protective equipment (face protection, gloves, fluid resistant/fluid impervious long-sleeved barrier garment)
- pH test strip, 4.5-10 pH range (part #K100-0104.5)
- Measuring cup with ¼, ½ and 1 cup measured markings

NOTES:

- Only trained teammates should perform this procedure
- The procedure can be used for residual acid concentrate less than (<) 5 gallons in liquid
- Three specific times to dump residual acid concentrate into the 5 gallon bucket include:
 - Residual from filter housing when replacing filter
 - Residual from hydrometer cylinder after specific gravity test
 - Residual from the initial 3.5 gallon disposal prior to transferring acid concentrate from mixer to final acid concentrate storage tank
 - Additionally anytime there is residual acid concentrate less than 5 gallons that requires disposal
- The neutralization process must be performed in a well-ventilated area

Procedure		Rationale	
1.	Put on PPE. Place DO NOT USE label on bucket.	1.	Reduces exposure to acid concentrate.
2.	Transfer small volumes of residual acid concentrate solution to an open 5 gallon bucket with a 3.5 gallon fill line.	2.	NOTE: 3.5 gallons should be the maximum amount added in the small bucket.

Incenter Hemodialysis Equipment, Water and Testing Devices

Procedure: 2-07-11A

DaVita Inc.

3.	Slowly add ½ cup of bicarbonate to the bucket and stir gently for 5 - 10 minutes.	3.	NOTE: Verify the bucket has a stirrer attached to bucket.
NOTE: It is important to wait at least one (1) minute in between addition of cups of sodium bicarbonate powder to the acid concentrate solution to allow time for reaction between the powder and the acid concentrate to take place.			
4.	Document the number of cups of sodium bicarbonate and the volume of residual acid concentrate solution on the <u>Neutralization and Disposal of Residual Acid Concentrate Log</u> .	4.	
5.	Measure the pH of the residual acid concentrate solution. If the pH is within 6 - 7, the process of neutralization is complete. Document the pH results on the <u>Neutralization and Disposal of Residual Acid Concentrate Log</u> .	5.	
6.	If the pH is not within 6 - 7, continue to add sodium bicarbonate powder to the residual acid concentrate solution one (1) cup at a time, allowing one (1) minute between the addition of each cup, until the pH measurement is 6 - 7. Discard solution down the designated drain.	6.	
7.	Rinse the residual acid concentrate solution container.	7.	
8.	Complete the <u>Neutralization and Disposal of Residual Acid Concentrate Log</u> .	8.	

NATURALYTE®

Liquid Acid Concentrate
For Bicarbonate Hemodialysis

45X

'A' CONCENTRATE

208.2 liters (55 gallons)

Catalog No.

2.0 K 2.5 Ga

13-2251-0

INDICATIONS FOR USE

NATURALYTE Liquid Acid Concentrate is indicated for use in patients undergoing extracorporeal bicarbonate hemodialysis for acute and chronic renal failure. NATURALYTE Liquid Acid Concentrate is intended to be used as one component in the preparation of dialysate in a three-stream proportioning hemodialysis machine according to a physician's prescription.

WARNING

- Failure to follow these Instructions for Use may result in patient injury or death.
- Check conductivity and pH of final dialysate prior to dialysis treatment and each time new concentrate is supplied to the machine. Refer to hemodialysis machine manufacturer's instructions to determine conductivity and pH of final dialysate.
- This product contains acetic acid and yields 4 mEq/L of acetate in the final dialysate. Following diffusion from the dialysate across the dialysis membrane to the blood, acetate is metabolized to bicarbonate. While the acetate from the acid concentrate will contribute to the serum bicarbonate level, the serum bicarbonate level of the patient during and immediately after the dialysis treatment is principally determined by the prescribed bicarbonate concentration which is set on the hemodialysis machine. Prescription of insufficient bicarbonate may contribute to metabolic acidosis; excessive bicarbonate may contribute to metabolic alkalosis. Both conditions are associated with poor patient outcomes.

CAUTION

- Federal law (U.S.A.) restricts this device to sale by or on the order of a physician.
- Wear safety glasses, gloves and clothing suitable to prevent exposure when handling.
- Acid concentrate can irritate the eyes and skin.
- Do not use if package is damaged or seal is broken.

Nominal Chemical Composition

NaCl	263 g/L
KCl	6.71 g/L
CaCl ₂	6.24 g/L
MgCl ₂	2.14 g/L
CH ₃ CO ₂ H	10.8 g/L
C ₆ H ₁₂ O ₆	45.0 g/L

Liquid Acid Contribution to Final Dialysate: 1:44 (Nominal Dilution)

SODIUM	100 mEq/L
POTASSIUM	2.0 mEq/L
CALCIUM	2.5 mEq/L
MAGNESIUM	1.0 mEq/L
ACETATE	4.0 mEq/L
CHLORIDE	105.5 mEq/L
DEXTROSE	100 mg/dL

Nominal Chemical Composition of Final Dialysate: Acid:Bicarbonate:Water (1:1.72:42.28)

SODIUM	137 mEq/L
POTASSIUM	2.0 mEq/L
CALCIUM	2.5 mEq/L
MAGNESIUM	1.0 mEq/L
ACETATE	4.0 mEq/L
CHLORIDE	105.5 mEq/L
DEXTROSE	100 mg/dL
BICARBONATE**	33 mEq/L

** Post reaction Bicarbonate

REQUIREMENTS

For use only with a three-stream hemodialysis machine calibrated to proportion 1 part acid to 1.72 parts bicarbonate concentrate to 42.28 parts purified water that meets ISO 13959 or AAMI RD62 water quality requirements. Use only with 45X bicarbonate ('B') concentrates.

STORAGE AND DISPOSAL

Store between 5°C and 30°C (41°F and 86°F). Product can withstand an exposure to temperatures down to 0°C and up to 40°C (32°F to 104°F) for a period of up to 72 hours. Mix thoroughly before use. Keep container sealed when not in use. Dispose of unused concentrate in accordance with local, state, and federal regulations.



**FRESENIUS
MEDICAL CARE**

RENAL THERAPIES GROUP



Manufacturer:
Fresenius Medical Care
Renal Therapies Group, LLC
Waltham, MA 02451 U.S.A.
1-800-323-5188

Patents apply, visit www.fmcna.com/patents

Printed in USA 71-4313.04 10/18



13-2251-0

LOT

Exp. Date:

NATURALYTE®

Liquid Acid Concentrate
For Bicarbonate Hemodialysis

45X

4X CONCENTRATE

208.2 liters (55 gallons)

Catalog No.

3.0 K 2.5 Ca

13-3251-9

INDICATIONS FOR USE

NATURALYTE Liquid Acid Concentrate is indicated for use in patients undergoing extracorporeal bicarbonate hemodialysis for acute and chronic renal failure. NATURALYTE Liquid Acid Concentrate is intended to be used as one component in the preparation of dialysate in a three-stream proportioning hemodialysis machine according to a physician's prescription.

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- Wear safety glasses, gloves and clothing suitable to prevent exposure when handling. Acid concentrate can irritate the eyes and skin.
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NaCl	263 g/L
KCl	10.1 g/L
CaCl ₂	6.24 g/L
MgCl ₂	2.14 g/L
CH ₃ CO ₂ H	10.8 g/L
C ₆ H ₁₂ O ₆	45.0 g/L

Liquid Acid Contribution to Final Dialysate: 1:44 (Nominal Dilution)

SODIUM	100 mEq/L
POTASSIUM	3.0 mEq/L
CALCIUM	2.5 mEq/L
MAGNESIUM	1.0 mEq/L
ACETATE	4.0 mEq/L
CHLORIDE	106.5 mEq/L
DEXTROSE	100 mg/dL

Nominal Chemical Composition of Final Dialysate: Acid:Bicarbonate:Water (1:1.72:42.28)

SODIUM	137 mEq/L
POTASSIUM	3.0 mEq/L
CALCIUM	2.5 mEq/L
MAGNESIUM	1.0 mEq/L
ACETATE	4.0 mEq/L
CHLORIDE	106.5 mEq/L
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STORAGE AND DISPOSAL

Store between 5°C and 30°C (41°F and 86°F). Product can withstand an exposure to temperatures down to 0°C and up to 40°C (32°F to 104°F) for a period of up to 72 hours. Mix thoroughly before use. Keep container sealed when not in use. Dispose of unused concentrate in accordance with local, state, and federal regulations.



**FRESENIUS
MEDICAL CARE**

RENAL THERAPIES GROUP



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Patents apply, visit www.fmcna.com/patents

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13-3251-9

LOT

Exp. Date:



FIDUS Medical Care
North America

Two Ledgeport Center, 95 Hayden Avenue
Lexington, MA 02173
1-800-662-1237

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Trade Name:	Acid Dialysate Concentrate Solution	HMS Rating:	
Chemical Name:	NA	Health:	1
Chemical Family:	NA	Flammability:	0
Formula:	See Product's Label - Acetic Acid (less than 225 mg/liter) - Calcium Chloride (less than 225 mg/liter)	Reactivity:	0
Synonyms:	NA	Protective Equipment:	B

II. HAZARDOUS COMPONENTS

In accordance with 29 CFR 1910.1200, materials listed in this section are in concentrations of 0.1% or more if carcinogenic and 1% or more if toxic, irritant etc.

Component	% In Product Less than 225 mg/liter	Primary Hazard Sensory Irritation	OSHA PEL 10 ppm (TWA)	ACGIH TLV 10 ppm (TWA) 15 ppm (STEL)
Acetic Acid (less than 225 mg/liter) CAS NO. 000064-19-7				

III. PHYSICAL DATA

Boiling Point:	212 degrees F	Melting Point:	NE
Specific Gravity (H ₂ O = 1):	1.14 -1.24	Vapor Pressure:	NE
Vapor Density (Air = 1):	NE	Solubility in H ₂ O:	Completely
% Volatiles by Weight:	NE	Evaporation Rate:	NE
pH:	2.4 -2.7 Range		
Appearance and Odor:	Clear, colorless liquid with acetic odor.		

IV. FIRE AND EXPLOSION DATA

Flash Point:	NE
Auto Ignition Temperature:	NE
Flammable Limits in Air:	
Extinguishing Media:	Alcohol foam, water fog, carbon dioxide or dry chemical. Use protective clothing and equipment for surrounding fire.
Special Fire Fighting Procedures:	Use protective clothing and breathing apparatus
Unusual Fire and Explosion Hazard:	Not considered an explosion or a fire hazard.

V. REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Temperatures below 40 degrees may cause product separation.
Hazardous Decomposition Products:	In the event of a fire carbon dioxide, carbon monoxide, and aldehyde gases may be released.
Hazardous Polymerization:	Will not occur.

NE = Not Established NA = Not Applicable

VI. HEALTH HAZARD DATA

Exposure Limits:	No chemical specific exposure limits are available.
Toxicity Data:	See effects of overexposure.
Carcinogenicity:	NE
Primary Routes of Exposure:	Ingestion: Give several glasses of water to dilute. Vomiting may occur, but do not induce. Call a physician. Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Skin: Remove contaminated clothing, wash skin with soap and water. Eyes: Wash eyes with plenty of water for 15 minutes, lifting lower and upper lids. Get medical attention immediately.
Effects of Overexposure:	Skin contact may cause irritation. Eye contact may cause tearing, irritation. Ingestion may result in hypotension, hypertension or tachycardia.
Acute:	None expected.
Chronic:	None expected.
Medical Conditions Generally Aggravated by Exposure:	None expected.

VII. SPECIAL PROTECTION INFORMATION

Ventilation Requirements:	Normal building ventilation.
Personal Protective Equipment:	
Respiratory:	Not normally required.
Eye:	Safety glasses. Contact lenses <u>should not</u> be worn when working with this material. Maintain eye wash station in area.
Gloves:	Vinyl or rubber
Clothing:	Wear impervious clothing or apron to prevent repeated or prolonged skin contact.

VIII. FIRST AID PROCEDURES

Eye Contact:	Immediately flush eyes with copious amounts of water for at least 15 minutes. Get medical attention if irritation, pain, swelling, tearing or other symptoms persist.
Skin Contact:	Wash with soap and water. Get medical attention if irritation, pain, swelling or other symptoms persist.
Ingestion:	Give several glasses of water to dilute. Vomiting may occur, but do not induce. Contact a physician.
Inhalation:	Move to fresh air. Get medical attention if irritation or other symptoms persist.

IX. SPILL OR LEAK PROCEDURES

Spill:	Cover spill with sodium bicarbonate or soda ash and mix. Sweep or scoop up mixture and place in metal container.
Disposal:	Not a hazardous waste. Dispose at an approved waste disposal site.

X. SPECIAL PRECAUTIONS

Keep container closed tightly to prevent product contamination or physical damage. Pour in a well-ventilated area away from heat or extreme cold.

XI. REGULATORY COMMENTS

SARA TITLE III:

The following materials are required to be reported to the National Response Center if there is a release greater than the designated amount: **None**

The following materials are subject to reporting requirements under SARA 313: **None**

The following hazard categories apply under SARA Section 311, 312: **None**

MASSACHUSETTS WORKER AND COMMUNITY RIGHT TO KNOW LAW:

This law (105CMR670.000) requires the reporting of substances on the Massachusetts Substance List present in concentrations of greater than 1%, except extraordinarily hazardous substances, which must be reported if the concentrations are greater than 1 ppm.

The following components are required to be reported under the Massachusetts Right to Know Law:
Acetic Acid

XII. PREPARATION INFORMATION

Prepared By:	Fred J. Christadore 8 King Road Rockleigh, NJ 07647
Company Contacts:	Fred J. Christadore or Larry Park
Telephone:	1-800-682-1237, Extension 2580 1-800-522-4662, Extension 6773
CHEMTREC:	1-800-424-9300 (Transportation Incidents)
Date:	January 1998
Supersedes:	May 1992

The data included herein are presented according to Fresenius Medical Care North America practices current at the time of preparation hereof, are made available solely for the consideration, investigation and verification of the original recipients hereof and do not constitute a representation or warranty for which Fresenius Medical Care North America assumes responsibility. It is the responsibility of a recipient of this data to remain currently informed on chemical hazard information, to design and update its own safety program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right to know and environmental protection.

Safety Data Sheet according to Regulation (EC) No 1907/2006

B. Braun Avitum AG

Revision date: 17.01.2011

Revision No: 2,00

Sol-Cart B

00047-0247

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Sol-Cart B

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Sodium bicarbonate for haemodialysis

1.3. Details of the supplier of the safety data sheet

B. Braun Avitum AG

Schwarzenberger Weg 73 - 79

D-34212 Melsungen

Responsible Department

Zentrale Service-Bereiche/Logistik und Supply Chain

Telephone: +49 (0) 5661 / 71-4422

Emergency telephone :+49 (0) 6132 / 84463 (GBK Gefahrgut Buero GmbH, Ingelheim)

Responsible for the safety data sheet: sds@gbk-ingelheim.de

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

This substance is not classified as hazardous according to Directive 67/548/EEC.

2.2. Label elements

Additional advice on labelling

The product does not require a hazard warning label in accordance with EC directives/the relevant national laws.

2.3. Other hazards

Not known.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

Solid matter

Sum formula: CHNaO3

Molecular weight: 84,01 g/mol

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
205-633-8	Sodium bicarbonate	100 %
144-55-8		
01-2119457606-32-0000		

Full text of R and H phrases: see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

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If you feel unwell, seek medical advice.

After inhalation

Move to fresh air in case of accidental inhalation of dusts.

After contact with skin

Wash hands with water as a precaution.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Seek medical treatment by eye specialist.

After ingestion

Rinse out mouth and give plenty of water to drink.

Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Contact with eyes, skin or oral tissues may cause irritation.

Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product does not burn, fire-extinguishing activities according to surrounding.

Any extinguishing means and measures are acceptable.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

No special protective equipment required.

Additional information

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation.

Do not breathe dust.

Use personal protective clothing.

6.2. Environmental precautions

This concentrate is not allowed to be released into the sewerage, surface water or groundwater.

6.3. Methods and material for containment and cleaning up

Pick up mechanically, avoiding dust, and provide disposal in suitable recipients.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).

Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with eyes.

Avoid the formation and deposition of dust.

Do not breathe dust.

Safety Data Sheet according to Regulation (EC) No 1907/2006

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Advice on protection against fire and explosion

No special protective measures against fire required.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Keep tightly closed.

Advice on storage compatibility

Incompatible with:

Acids

Alkaline metals.

7.3. Specific end use(s)

Sodium bicarbonate for haemodialysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Occupational exposure controls

Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

Obey TLV for common dust, if applicable.

Protective and hygiene measures

When using, do not eat, drink or smoke.

Avoid contact with eyes.

Wash hands before breaks and at the end of workday.

Take off immediately all contaminated clothing.

Respiratory protection

Dust mask must be worn if exposed to dust.

(Particle filter P1).

Hand protection

Protective gloves resistant to chemicals made off natural-rubber latex, minimum coat thickness 0.6 mm, permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Lapren 706> made by www.kcl.de.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Eye protection

Safety goggles with side protection (EN 166).

Skin protection

Not required under normal use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Powder
Colour:	White
Odour:	Odourless

pH-Value (at 20 °C):

7,9 - 8,4 (50 g/l)

Test method

Changes in the physical state

Melting point:

270 °C Decomposition

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Flash point:	n.a.
Lower explosion limits:	n.a.
Ignition temperature:	n.a.
Vapour pressure:	n.d.
Density (at 20 °C):	2,22 g/cm³
Water solubility: (at 20 °C)	96 g/L

9.2. Other information

Bulk density: ~ 1000 kg/m³

Decomposition temperature: > 50 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with strong acids.

Reactions with alkali metals.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Alkaline metals

Acids.

10.6. Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

LD50/oral/rat: = 4220 mg/kg (RTECS)

Irritation and corrosivity

Skin irritation (rabbit): Slightly irritating.

Eyes irritation (rabbit): Slightly irritating.

Sensitising effects

Not classified.

Severe effects after repeated or prolonged exposure

STOT - Single exposure: Not classified.

STOT - Repeated exposure: Not classified.

Aspiration hazard: Not classified.

Carcinogenic/mutagenic/toxic effects for reproduction

Carcinogenicity: Not classified.

Mutagenicity: Ames-Test: Negative (IUCLID)

Teratogenicity: Not classified.

Empirical data on effects on humans

Contact with eyes, skin or oral tissues may cause irritation.

Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

If appropriately handled and if in accordance with the general hygienic rules, no damages to health have become known.

Safety Data Sheet according to Regulation (EC) No 1907/2006

B. Braun Avitum AG

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00047-0247

SECTION 12: Ecological information

12.1. Toxicity

LC50/Gambusia affinis/96 h = 7550 mg/l (IUCLID)

EC50/Daphnia magna/48 h = 2350 mg/l (IUCLID)

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Low hazard to waters.

Further information

If handled and used properly, no adverse ecological effects are to be expected.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Can be landfilled or incinerated, when in compliance with local regulations.

Waste disposal number of waste from residues/unused products

180107	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care); wastes from natal care, diagnosis, treatment or prevention of disease in humans; chemicals other than those mentioned in 18 01 06
--------	--

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed of like the product.

SECTION 14: Transport information

Other applicable information

No hazardous material as defined by the transport regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

1999/13/EC (VOC): 0 %

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Safety Data Sheet according to Regulation (EC) No 1907/2006

B. Braun Avitum AG

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Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

18-1529237
RSN 1322345

Balance Technologies



PROJECT

DaVita
1411 South Potomac Street
Suite 100
Aurora, CO 80012

MECHANICAL CONTRACTOR

Allen's Heating, Air Conditioning & Sheet Metal, Inc.
5545 W 56th Ave.
Unit B
Arvada, CO 80002

REFERENCE JOB NUMBER 02-1118-877



Balance Technologies



Allen's Heating, AC & Sheet Metal, Inc.
5545 W. 56th Ave
Unit D
Arvada, CO 80002

December 4, 2018

Subject: Davita - Aurora

Dear Curt,

The enclosed data is submitted as the final Test and Balance Report for the Exhaust System.

This project has been completed per specifications and mechanical plans in accordance with the industry standards except where indicated in the general notes.

If you have any questions concerning this report, please feel free to contact us.

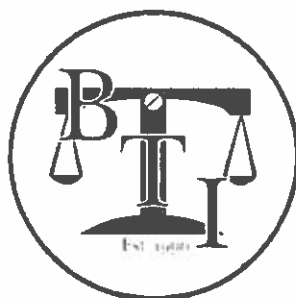
Cordially,

A handwritten signature in blue ink, appearing to read 'Randy J. Patz', is written over a light blue circular background.

Randy J. Patz
Balance Technologies

7424 S. University Blvd., Suite E-151, Centennial, CO. 80122. 720.350.9817

Balance Technologies



Instrumentation Used

Shortridge Flow Hood (ADM-860C-1) Serial No. M11375	Calibrated	01/05/18
Thermometer - Taylor (6076-10) -40 to 120F S/N - BT015 & BT012	Calibrated	Manuf.
Thermometer - Taylor (6072-10) 0 to 220F S/N - BT016 & BT014	Calibrated	Manuf.
Digital Temp. Cooper (SRH77A) 0 to 240F S/N - 27-958429	Calibrated	09/07/18
Sling Pycrometer - Bachrach (12-7011) 0 to 90% RH S/N - BT010	Calibrated	11/10/18
Digital Volt. Ohm and Ampmeter. Sperry (DSA2007) Serial No. 1121263	Calibrated	09/07/18
Shortridge Hydrodata (HDM-250-1) Serial No. W11131	Calibrated	1/05/18

PROJECT DAVITA

FAN DATA	FAN NO. EF - 1		FAN NO. EBF - 1		FAN NO.	
Location	ROOF TOP		CEILING			
Service	RESTROOM / WASTE		RESTROOMS			
Manufacturer	GREENHECK		GREENHECK			
Model Number	CUE-095-D-X		BSD-80-4X-QD			
Serial Number	15639388		12272361 1010			
Motor Make/Style	MCMILLAN		MARATHON			
Motor H.P./RPM/Frame	1/8 / 1660 / N/G		1/4 / 1725 / 48Y			
Volts/Phase/Hertz	115 / 1 / 60		115 / 1 / 60			
F.L. Amps/S.F.	2.6 / T.P.		5.0 / 1.35			
Motor Sheave Make/Model	DIRECT DRIVE		BROWNING			
Motor Sheave Diam./Bore	DIRECT DRIVE		1VP30 / 5/8"			
Fan Sheave Make	DIRECT DRIVE		INLINE			
Fan Sheave Diam./Bore	DIRECT DRIVE		INLINE			
No. Belts/Make/Size	DIRECT DRIVE		1 / CARLISLE / 3L250			
Sheave Distance	DIRECT DRIVE		12.75"			
TEST DATA	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
CFM	175	174	240	246		
Fan RPM	N / G	VARI SPEED	N / G	INLINE		
Voltage	115	121	115	121		
Amperage	2.6	2.1	5.0	4.6		

REMARKS: NONE
 FILE DA -
 TEST DATE NOV. 2018

 READINGS BY R.P.
 Balance Technologies



SYSTEM EXHAUST

REMARKS: NONE

READINGS BY	R P
	Balance Technologies