Improving Health

Why Haycarb Activated Carbon?

- High purity
- Ideal pH level
- Effective in removal of chlorine and chloramines
- Competitive price

Kidneys play an important role in human health as failure of kidneys is fatal to humans. Patients with acute disturbance in kidney function or chronic kidney disease undergo Dialysis, the treatment which artificially replaces the functions of the kidney. There are two main types of dialysis: Hemodialysis and peritoneal dialysis and activated carbon is used in both types of dialysis equipment.

Activated Carbon for Dialysis

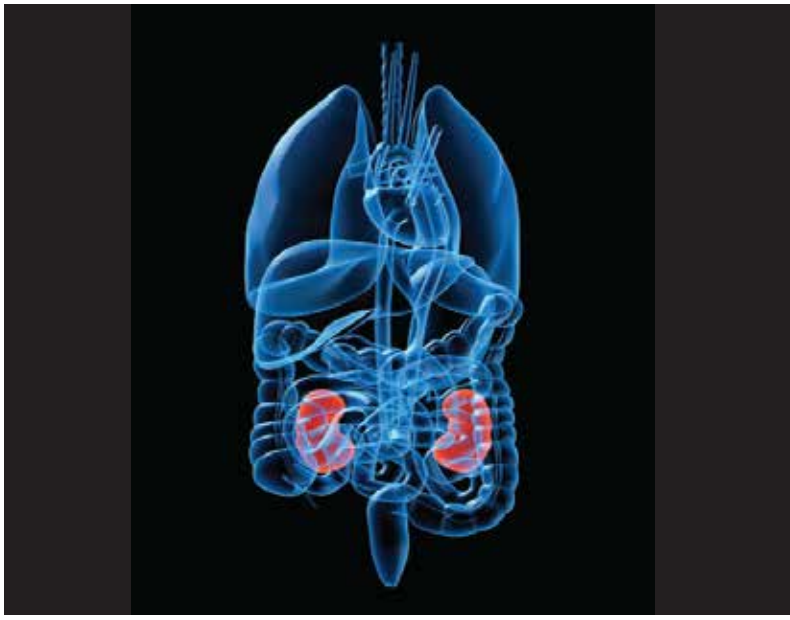
Haycarb activated carbon provided for this application meets 3 essential criteria: semi permeable membrane is not affected by the minimal release of soluble ions, meet the optimum Iodine number that helps maintain low monochloramine levels in the water used to produce dialysate, and achieve near neutral pH levels.

Soluble Ions

Carbon used to produce water for dialysate must not release soluble ions to the semi permeable membrane. It must contain minimal level of impurities such as metals that can be present in the ash content of the carbon. This is a problem easily avoided with Haycarb products as coconut shell carbon has very low levels of inorganics compared to coal or wood carbon.

Monochloramine Levels

The water used in the hemodialyzer removes the unwanted toxic substances out of the blood stream of the patient via the semi permeable membrane. The water used to produce dialysate must not contain chemical and microbial contaminants that are unsafe for the patient. It is essential that monochloramine levels are maintained below 0.1 mg/L in water used for dialysate. This condition can be easily satisfied with Haycarb activated carbon as it meets the optimal Iodine number required for effective chlorine/chloramines removal. As water is a carrier of many minerals and bacteria, the challenge is to provide water treatment that removes most, if not all, of the minerals and bacteria from the water supply being fed in to the dialysate and dialyzer. To overcome this challenge, water has to be treated first with acid washed activated carbon. This is done to ensure that the water is free from any unwanted substances to protect the membrane as well as ensure that the pH of the water is near neutral, which prevents any substance getting in to the blood stream.



Effective pH Levels

An important function of activated carbon when used in dialysis systems is the removal of chlorine and chloramines to prevent hemolysis, which is the rupturing of the blood cells in dialysis patients. To achieve this, that carbon must exhibit a near neutral effluent pH and removal of organics by activated carbon is more effective at pH levels less than 7. Any activated carbon that is not acid-washed usually produces an initial effluent with a pH greater than 7. The actual rise in pH depends on several factors such as the ash content of the starting material, total dissolved solids (TDS), specifically anions such as sulfate, of the influent water, and pH of the influent water. Haycarb's acid washed carbon offers the customer a product where the pH is reduced to below 7 and

Technical Information

Parameter	Typical Values
Moisture Content ASTM D2867	5% (w/w) max
Ash Content ASTM D2866	1% max
Apparent Density ASTM D2854	0.45 g/cc typical
Iodine No ASTM D4607	1000 mg/g min
pH ASTM D3838	6-8
Hardness No ASTM D3802	98% min
Particle Size	12 x 40, 18 x 40

We provide custom designed products for specific customer applications within the general range.

Packaging

Standard packaging is designed primarily to prevent deterioration of accurately graded granules and preclude the adsorption of moisture or atmospheric contaminants. Other packaging criteria can be accommodated on request.

Bulk Bag
Net. 500 Kg

Sacks
Net. 25 Kg

Product Testing Services

Haycarb's Research & Development laboratories in Sri Lanka and its overseas subsidiaries are equipped to perform all the standard testing required for Activated Carbons together with any other specialized product or application related testing requirements.

Warranty Disclaimer

Please confirm the specification of any particular grade with your representative prior to purchase. The user is responsible for ensuring that the product is correctly specified prior to purchase and Haycarb makes no express warranty as to suitability for specific application.

NSF
Haycarb Activated Carbon grades that are Tested and Certified by NSF International against NSF/ANSI Standard 42 for material requirements only, are listed on: www.nsf.org/certified/DWTU
Component

MEMBER Water Quality ASSOCIATION

ISO 9001:2008 Certified

ISO 14001:2004 Certified

HAYCARB
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