

CLAIMS

1. A system for detecting occlusion of a catheter comprising:
 - a catheter adapter having a proximal end and a distal end;
 - a catheter that extends distally from the distal end of the catheter adapter;
 - a housing having a proximal end, a distal end, and a wall comprising an inner surface forming an inner lumen of the housing that extends between the proximal end of the housing and the distal end of the housing to thereby provide a fluid pathway into the catheter when the housing is coupled to the catheter adapter;
 - one or more transmitters positioned in wall the one or more transmitters emitting electromagnetic signals into the inner lumen of the housing in a distal direction;
 - one or more transducers that receive the electromagnetic signals after the electromagnetic signals have been reflected by the catheter; and
 - a processor that analyses the reflected electromagnetic signals to detect when the reflected electromagnetic signals indicate that the catheter of the catheter adapter is occluded.
2. The system of claim 1, wherein the housing is integral to the catheter adapter.
3. The system of claim 1, wherein the housing is separate from but connectable to the catheter adapter.
4. The system of claim 1, wherein a distal end of the catheter includes one or more inner facets, outer facets, inner curved portions, or outer curved portions to improve the reflection of the electromagnetic signals.