



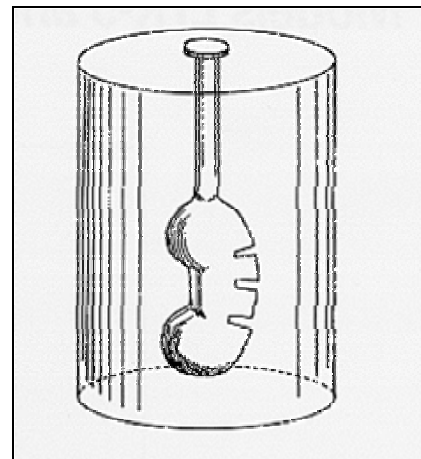
Model LTK Lithotripter Phantoms

PRODUCT DESCRIPTION

The Model LTK-5 was designed for use in all phases of lithotripsy, thereby providing a means of teaching physicians the techniques of Lithotripsy in a simulated environment.

The phantom can be used as part of a quality assurance program, to verify coincidence of the 2-D system and the focal point of the shock waves. Routine equipment performance monitoring can reduce the number of repeat examinations, the duration of examinations and maintenance time.

The Kidney Lithotripter phantom contains a life-size, organ-shaped cavity. It contains three internal conical-shaped renal pyramids, simulating the structures within the kidney where stones may become trapped.



SPECIFICATIONS

General

Diameter	15.0 cm*
Height	18.0 cm*
Weight	2.6 Kg*
End Cap Material	White, PVC
Scanning Surfaces	1 Continuous cylinder

Tissue Mimicking

Material

Type	Urethane rubber
Freezing Point	< -40 degrees C
Melting Point	> 100 degrees C
Attenuation Coefficient	0.5 dB/cm/MHz measured at 3.5 Mhz

3. Fill the cavity with water or a suitable tissue-mimicking material.
4. Drop one or more stones* into to cavity through the filling hole. Replace the filling plug .
5. Apply an adequate amount of high viscosity acoustic coupling gel on the scan surface.
6. Using a 2-Dimensional imaging system, locate the stones within the kidney or gall bladder of the phantom.
7. Fragment the stones using a Lithotripter according to the manufacturer's operating procedure.
8. Again image the phantom cavity, to determine the degree of fragmentation achieved.
9. Upon completion of the practice trials, rinse the phantom cavity water several times to remove the stone fragments.

Speed of Sound 1450 m/s \pm 1.0% at 23° C

Target

Number of Targets	1
Cavity Volume	120 cc*
Length	10.2 cm*
Width	4.5 cm*
Thickness	3.5 cm*

*Nominal dimensions.

PROCEDURE

1. Place the phantom on a clean, flat surface.
2. Remove the filling plug located on the top of the phantom.

The same procedure may be used in a quality assurance program, to verify coincidence of the 2-D system and the focal point of the shock waves.

*Stones: If a suitable supply of kidney or gall stones can not be obtained, small irregular shaped pieces of gravel can be used.

QUALITY ASSURANCE RUBBER-BASED PHANTOMS CARE AND HANDLING

For best results the phantom should be kept clean at all times. In particular a build-up of dried coupling gel on the scan surface should be avoided. The phantom may be cleaned with warm water using a lint free cloth. Particularly stubborn stains and dirt may be removed with a mild household cleaner. The use of petroleum solvents should be avoided since they may adversely react with the rubber-based material.