



**FIG. 1.** Standard version of London liver phantom containing three simulated tumors using solid plastic spheres. Screw-threaded plastic cap is on lateral aspect of right lobe for easy filling and emptying of liver shell.

posterior surface in the region of the porta hepatis. The hard plastic liver shell containing the solid plastic sphere lesions is mounted on a plastic stand in the correct anatomical orientation. A plastic water tank, cross-section 30 cm by 30 cm and depth of 18.5 cm, is necessary to simulate the abdomen. The water level in such a tank is 1 cm above the top surface of the liver shell and 0.5 cm below the top of the tank. A plastic lid for the tank is advisable to prevent water splashing onto the collimator face—particularly important if a small amount of background activity has been introduced into the water. The emission-type phantom should be filled with water containing approximately 1 mCi technetium-99m activity. The alternative variant of the phantom is one without the plastic stand and water tank but instead uses a tissue equivalent rubber abdomen (2,3). This variant is suitable for interlaboratory comparison studies, and the liver shells can be covered with an opaque paint to ensure that the study is *blind* (2,3). Nonstandard

variants can be constructed with different tumor sizes and locations.

RICHARD F. MOULD  
Westminster Hospital  
London SW1P 2AP

#### FOOTNOTE

\* The phantom can be obtained directly from the Department of Medical Physics, Page Street Wing, Westminster Hospital, at the cost of materials and postage only.

#### ACKNOWLEDGMENT

I am grateful to Mr. Robin Hughes of the Westminster Hospital for his expertise in the fabrication of the London liver phantoms.

#### REFERENCES

1. MOULD RF: A liver phantom for evaluating camera and scanner performance in clinical practice. *Brit J Radiol* 44: 810-811, 1971
2. POTTER DC, McCREADY VR, MOULD RF, et al: (DHSS Working Party Members): A survey of some radionuclide imaging instruments with an anthropomorphic liver phantom. DHSS publication STB/3/78, London, 1978
3. World Health Organisation: Quality assurance in nuclear medicine: A guide prepared following a workshop held in Heidelberg, Federal Republic of Germany, 17-21 November, 1980. WHO publication, Geneva, 1982, pp 52-53
4. ELLIOTT AT, SHORT MD, POTTER DC, BARNES KJ: Performance assessment of gamma cameras, Part 1. DHSS publication STB/11/80, London, 1980

#### BOOKS RECEIVED

*Noninvasive Methods in Atherosclerosis Research (Atherosclerosis Reviews, Volume 10)*. Ruth Johnsson Hegyeli, Ed. New York, NY, Raven Press, 1983, 214 pp, \$39.50

*Nuclear Power: Management of High-Level Radioactive Waste*. World Health Organization. Copenhagen, Denmark, World Health Organization, 1982, 63 pp, \$5.00

*The Coronary Circulation in Health and Disease*. Melvin L. Marcus. New York, NY, McGraw-Hill, 1983, 465 pp, \$45.00

*The Human Cost of Nuclear War*. Stephen Farrow, Alex Chown, Eds. Cambridge/Llandaff, Cardiff, United Kingdom, The Medical Campaign Against Nuclear Weapons (MCANW), 1983, 164 pp, £1.95

*CRC Handbook of Chemistry and Physics (64th Edition 1983-1984)*. Robert C. Weast, Melvin J. Astle, William H. Beyer, Eds. Boca Raton, FL, CRC Press, 1983, 2303 pp, \$69.95

*Gamuts in Nuclear Medicine*. Frederick L. Datz. Norwalk, CT, Appleton-Century-Crofts, 1983, 289 pp, \$22.50