


**D.O.T. SPECIFICATION 7A, TYPE A  
PACKAGING TEST RECORD**

**DATE:** DECEMBER 17, 2004  
**PACKAGE IDENTIFICATION:** TRIPLE UNIT DOSE PIG SHIPPING SYSTEM, MODEL #001-739

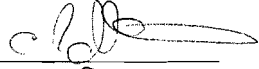
PACKAGE	DESCRIPTION	SIGNED OFF BY
<b>Outer Case:</b> manufacturer of case construction material wall strength, lb test dimensions, inches closure internal cushioning	Zero Plastic rotation molded polyethylene N/A 11.75x11.75x12.5 (h) hinged lid, 2 clasps high density polyurethane foam	
<b>Lead Insert Shielding Package:</b> material   insert support	cast lead in a contoured shape to supply appropriate shielding to inner pig - open top and bottom on lead - holds 3 pigs two lead sheets in top and one in bottom of case held in place by the foam  metal plate to hold and position lead	
<b>Unit Dose Pig:</b> material   closure cushioning dimensions, "	lead encased in plastic shell with integral liner Lead: body .5" top 1.44" bottom 1.2" plastic screw threads between top and bottom sections, single turn twist lock N/A 10.2" long x 2.4" diameter	
<b>Lead Shielding Combined:</b>	bottom: 1.2" + .125" = 1.325" top: 1.44" + .25" = 1.690" sides: varies depending on location from .651" to 1.73"	
<b>Weight:</b> outer shield and case unit dose pig #1 unit dose pig #2 unit dose pig #3 Total Weight	78 lbs 8.9 lbs 8.9 lbs 8.9 lbs 105 lbs	
<b>Primary Container Unit Dose Pig:</b> syringes   nominal volume ml   closure content simulation absorbent materials	one 5 cc B-D one 5 cc B-D one 5 cc B-D syringe used in pigs Case #1 contained 3.2 ml, 3.4 ml, 3.6 ml used in syringes Case #2 contained 3.4 ml, 3.5 ml, 3.4 ml used in syringes needle and needle cover water, colored absorbent sheet (001-771)	
<b>Examination of test sample before tests:</b> Describe: defects distortions deterioration printing imperfections	none none none none	

TESTS	NOTES	SIGNED OFF BY
<b>TEST RECORD:</b>	Perform tests in order and attach a photographic record	
<p><b>WATER SPRAY TEST:</b> 49 CFR 173.465 (b) (must be performed before remaining tests)</p> <p>Spray Package: from 1 or 4 sides rate approx. 2 inches / hour time at least 1 hour</p> <p>Describe Results:</p>	<p>spray from 4 simultaneously greater than 2 inches / hour sprayed for 1 hour</p> <p>The water spray did not affect the plastic shipping container. There was some water on the case lip.</p> <p>NOTE: If the package was sprayed from 4 sides simultaneously, the other tests may begin up to 2 hrs. after the water is turned off.</p> <p>If the spray is from 1 direction on each side sequentially, the compression test must begin within 1 hour.</p>	<p><u>CS</u></p> <p><u>CS</u></p>
<p><b>FREE DROP TESTS:</b> onto flat concrete surface</p> <p>Drop Test one foot onto 8 corners: 49 CFR 173.465 (c) (2)</p> <p>Describe Results:</p> <p>Drop Test four feet for maximum damage: 49 CFR 173.465 (c) (1)</p> <p>Describe Results:</p> <p>Drop Test 30 feet: 49 CFR 173.466 (a) (1)</p> <p>Describe Results:</p>	<p>used Case #2 dropped on all 8 corners</p> <p>small scratches on corners of case case is OK opened case pigs are OK</p> <p>i) 5 cc B-D dry needle cap ii) 5 cc B-D dry needle cap iii) 5 cc B-D - dry needle cap</p> <p>zip tie case closed thru hasp drop onto latches and hasp for maximum damage</p> <p>a) scratched case, but held together and stayed closed, but plastic wire tie broke b) hasp is slightly bent – case is OK c) pigs are OK and lift straight out d) syringes all have dry needle caps - no leakage</p> <p>Case #1 taken to top of building and dropped 30 feet onto concrete</p> <p>case hit on top case plastic bent – top bulged out, but stayed closed outer lead slightly deformed all three tops were cracked, but were in place – removed tops, but bottoms stuck in lead removed tops</p> <p>a) the 5 cc B-D syringe – needle cap and absorbent material are dry – no leakage b) the 5 cc B-D syringe – needle cap and absorbent material are dry – no leakage c) the 5 cc B-D syringe – the ears and thumb portion of plunger broke off – needle cap and absorbent material are dry – no leakage</p> <p><b>PASSES TEST</b></p>	<p><u>CS</u></p> <p><u>CS</u></p> <p><u>CS</u></p> <p><u>CS</u></p> <p><u>CS</u></p>

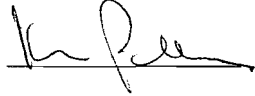
TESTS	NOTES	SIGNED OFF BY
<p><b>PENETRATION TEST:</b>  49 CFR 173.466 (a) (2) and IATA 10.6.3.5.2  using 1.25 in. diameter bar with  hemispherical end weighing 13.2 lbs.</p> <p>Drop from 67 inches:  strike point  clock time</p> <p>Describe Results:</p>	<p>hit center of top lid  N/A</p> <p>the bar put indent in center of top  case stayed together  pigs are OK  syringes:  5 cc B-D syringe is OK  5 cc B-D syringe is OK  5 cc B-D syringe is OK</p> <p><b>PASSES TEST</b></p>	<p><u>CS</u></p> <p><u>CS</u></p>
<p><b>COMPRESSION TEST:</b>  49 CFR 173.465 (d)  performed December 1999  24 hours compression:  weight in lbs.  clock time - start  clock time - finish</p> <p>Describe Results:</p>	<p>greater than 600 lbs  N/A  timer, 24 hours</p> <p>NOTE:  Compression test was performed by placing a  sheet of plywood with lead bricks onto the top of  the plastic case. The heaviest system weighs 95  lbs</p> <p>The weight calculation is either  (2 lb./in<sup>2</sup> x vertical projected area of package,  which would be 277 lbs)  or  (5x's the weight of the package, which is 475 lbs.)</p> <p>We used over 600 lbs. of lead bricks on top of the  shipping system.</p> <p>There was no damage or effect to the plastic  container. None of the inner shields were  damaged during this test.</p>	<p><u>CS</u></p> <p><u>CS</u></p>

ACCEPTANCE CRITERIA:	<ol style="list-style-type: none"> <li>1. Damage to the packaging may not cause loss or dispersal of simulated contents.</li> <li>2. Damage to the packaging may not cause an increase in calculated surface radiation exposure.</li> <li>3. The test record must be complete and accurate, and the photographic record attached.</li> </ol>	
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Tests performed by:



Initials CS



Initials KE

Date: 12/21/04