

Antiviral Delivery System
Texas A&M University
ENGR 112
Spring 2018
Description Barcode Cards and How to Decode the Data

The number and type of the pellets to be delivered into the well will be encoded on four cardstock strips. Each strip of cardstock will be 3.5" wide, 10.0" long, and contain up to nine 0.5" long, 3.5" wide stripes separated by 0.5" spaces. In our binary code, a black stripe indicates a "1" and a white stripe indicates a "0".

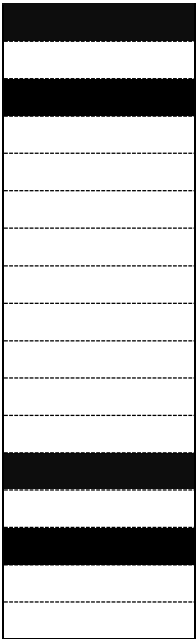
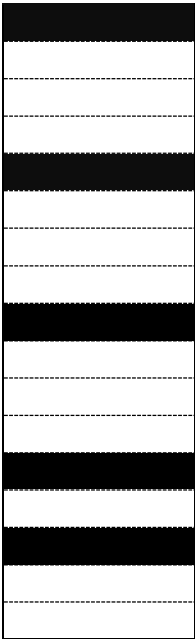
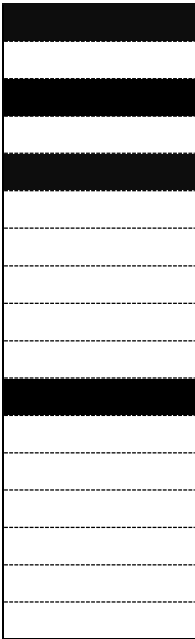
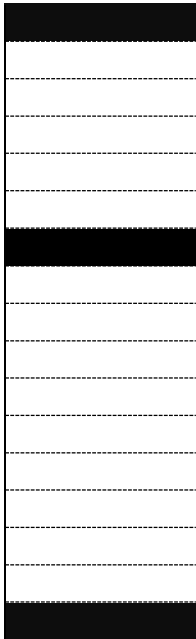
The first stripe indicates "start reading". It will always be present and will always be black. The next three stripes indicate the material of the pellets, as shown below:

Material	Binary Code	Type 1 vs	Type 2
White Glass	001	Large	Small
Red Glass	010	Large	Small
Blue Glass	011	Large	Small
Steel/HDPE	100	Steel	HDPE

The remaining five stripes indicate the number of pellets of Type 1 and Type 2, as shown below:

Type 1	Type 2	Code	
		Decimal #	Binary #
0	0	1	00001
1	0	2	00010
2	0	3	00011
3	0	4	00100
0	1	5	00101
1	1	6	00110
2	1	7	00111
3	1	8	01000
0	2	9	01001
1	2	10	01010
2	2	11	01011
3	2	12	01100
0	3	13	01101
1	3	14	01110
2	3	15	01111
3	3	16	10000

These strips show examples of possible bar codes

<i>White</i>	<i>Red</i>	<i>Blue</i>	<i>Steel/HDPE</i>	
				<div>Start Reading</div> <div>Least Significant Digit</div> <div>Material Type</div> <div>Most Significant Digit</div> <div>Border Space</div> <div>Least Significant Digit</div> <div>Number of Pellets of Each Type</div> <div>Most Significant Digit</div>
<i>3 Large</i> <i>2 Small</i>	<i>0 Large</i> <i>3 Small</i>	<i>1 Large</i> <i>0 Small</i>	<i>3 Steel</i> <i>3 HDPE</i>	

Note: Dashed lines will not be present on cards. They are present for clarity in counting spaces only