





STATEMENT OF CODE UNIQUENESS

Brooks, along with several other manufacturers, provides a range of storage tubes marked on the bottom with a Data-Matrix 2D barcode. Also, in common with other manufacturers, Brooks guarantees that within our range of FluidX 2D labelled tubes we will never duplicate a number therefore ensuring that each tube has a unique barcode sequence (I.D.) and therefore a guaranteed chain of custody. However an issue arises when a customer is presented with a "mixed population" of tubes i.e. where there are tubes from two or more manufacturers. This situation most commonly presents itself when two different groups collaborate, a merger occurs, or when a user wishes to change their supplier of 2D tubes. Since, in general, there is no agreement between manufacturers of 2D tubes there is the possibility that two tubes from different manufacturers may have the same numeric code. Clearly this could cause a major issue in that it would then be impossible to positively identify the content of each tube.

Brands	Standard 2D Structure	Code Type	Example	Standard 1D Rack Structure	Example	Do they offer Customized Tube Codes?	Other info
Brooks FluidX Jacket Tubes	2 letters + 8 digits	Black on White	FD03119999	2 letters + 8 digits	SA00188129	Yes – either custom prefix or complete custom coding	Racks also available with custom prefix or complete custom coding
Brooks FluidX Non-Jacket Tubes	10 digits	Black on White * White on Black optional	1018221893	2 letters + 8 digits OR 8 digits	SA00370832 50087083	Yes – complete custom numerical coding	Non-coded & alphanumeric coding for tubes also available. Racks available with custom prefix coding or complete custom coding
Brooks REMP	10 digits	White on Black	2011795017	REMP + 8 digits	REMP20257885	Yes	Racks available with custom coding
Thermo- Scientific Nunc	10 digits	White on Black	NUXX11111C	10 digits	NUXX11111C	No	Unique 14 x 14 array 2D code
Thermo Matrix	10 digits	White on Black	0225276533	2 letters + 8 digits	TS00060318	Yes	Can encode alphanumeric 2D barcodes on a 12 x 12 barcode
LVL Technologies	2 letters + 10 digits	White on Black	LVL1004218212	3 letters + 9 digits	LVL100040322	Yes	
Micronic	10 digits	White on Black	8006670199	10 digits	8000078756	Yes	Customized 2D Data-Matrix codes have a 14 x 14 symbol size in 96-, 48- and 24-well tube format.
Greiner	1 letter + 9 digits	White on Black	G800598865	1 letter + 9 digits	G900006256	Yes	Symbol size of 12 x 12 allows for 10 digits or 6 alphanumeric. A size of 14 x 14 allows16 digits or 10 alphanumeric.
Brooks 4titude – All semi or fully-skirted Microplates		Code 128		4T + 6 digits	4T123456	Yes	Custom 1D available – allow up to 10 digits of complete custom
Brooks 4titude - Random Access Plates	8 digits	White on Black	00005111	4T + 6 digits	4T123456	Yes	Custom 2D available – contact 4titude for more information Custom 1D available – allow up to 10 digits of complete custom

Table 1 - Barcode information for multiple suppliers

Automated Storage Systems

Cryopreservation & **Cold Chain Solutions**

Informatics & **Technical Solutions**

Sample Storage, **Lab Services & Transport** **Sample Consumables** & Instruments

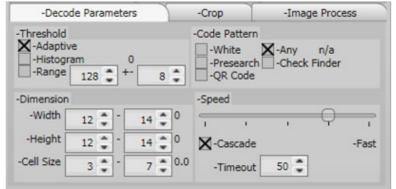




A data matrix looks like a square group of dots. The more dots you have the more information you can store. Part of this information is error correction. This means that if the code is partly damaged it can still be decoded.

The FluidX tube uses a black on white 2D barcode as standard. This means it has a white border to improve the quiet-zone around the edge of the tube. The quiet zone is important as it helps the reading software separate the code from the background.

To cope with all manufacturers' tubes, the reader software needs to be robust to deal with multiple dimensions & multiple colours. Intellicode's decoder is fully programmable to cope with all manufacturers' tube dimensions and colours.



Intellicode Software

The default "out of the box" setting should read any colour code using any 10 x 10 - 14 x 14 dimensions, covering most manufacturers' datamatrix codes.

Even mixed racks of multiple manufacturer tube types are often no problem for the Intellicode $^{\text{TM}}$.



Tube Coding Options



Automated Storage Systems Cryopreservation & Cold Chain Solutions

Informatics & Technical Solutions

Sample Storage, Lab Services & Transport Sample Consumables & Instruments