



Traceability in AI through machine readable codes

Innovative printing solutions...

By seamlessly integrating laboratory software, print software, and production machinery, we establish an error-free data flow, enabling comprehensive traceability throughout the entirety of the semen straw production process. Machine readable codes on straws can store a large amount of information in a very compact format and facilitate the transfer of information from the field back to the laboratory.

...for controlling semen production





Minitube's new printing software, **PrintControl**, offers the user the option of creating any number of different layouts. **Free texts, database fields, codes, counters** etc. can be defined within these layouts. Once defined, these fields are automatically filled with the information when a data record is selected.

Breed Short Name	Coll No.	Date of Ejac Collection	Days Rest	Donor Name	Donor Number	Extender	Package Name	Production Date	Volume per Dose [ml]	Calculated Doses
FV	1	9/22/23	10	Magnus	252569	Triladyl	MiniP Rot	9/22/23	0.22	709
FV	1	9/22/23	10	Magnus	252569	Triladyl	MiniP Rot	9/22/23	0.22	709
FV	1	10/6/23	14	Magnus	252569	Triladyl	MiniP Rot	10/6/23	0.22	786
HF	1	10/6/23	11	Hugo	252571	Triladyl	MiniP Rot	10/6/23	0.22	459
FV	1	10/6/23	14	MasterBulle	889966	Triladyl	MiniP Rot	10/6/23	0.22	548

PrintControl
(REF. 18300/0000)



(+ More benefits)

- + Browser-based and platform-independent software
- + One software to support all Minitube printers (MiniJet/CombiSystem, EasyCoder, MultiCoder)
- + Seamless data entry and editing via Prism10 Bull or Excel
- + Intuitive user interface and modern design
- + Clear print on straws of all colors and both 0.25 and 0.5 ml straws
- + Serialization with a continuous counter in both text and code
- + Print preview functionality for easy control of print results





1D-Code

(all Minitube printers)



- Barcode (Code 128 B)
- Variable amount of characters (depending on length, independent of height)
- Proven and widely used technology
- Easy to scan with all standard readers and mobile devices
- High-resolution and clear print on straws

2D-Code

(MiniJet, CombiSystem)

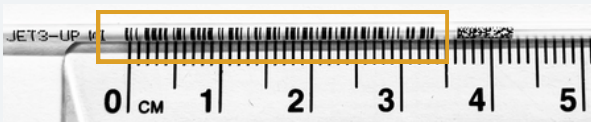


- Datamatrix Code (rectangular or square* type)
- Variable amount of characters (depending on height and length)
- Decode with special 2D code scanners or mobile devices
- High information density in a small space, multiple codes can be printed on one straw

*Square type not applicable on straw (limited space)

Comparison 1D-Code and 2D-Code

1D, e.g. 13 characters, 34 mm length



2D, e.g. 13 characters, 6 mm length



Possible 2D-Code lengths

	NUMERIC	ALPHANUMERIC	BINARY	EXAMPLE
8 X 18	10	6	3	
8 X 32	20	13	8	
8 X 48	36	25	16	
8 X 64	48	34	22	



Test scanning Datamatrix Codes with your smartphone using the Scanbot SDK app! Scan the QR code to download the app from your app store:
<https://scanbot.io/de/products/barcode-software/>





Advanced software meets advanced equipment

The **JET3UP MI printer head**, featuring precision inkjet technology, enables the printing of complex **Datamatrix Codes** on semen straws. This upgraded printer head is now an optional component of every **MiniJet** and **CombiSystem**. Existing devices can be retrofitted to benefit from these advanced capabilities.



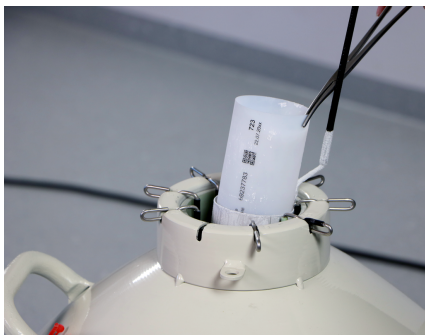
Versatile printer for all consumables

Using the **MultiCoder** with its wide range of product carriers, also straw storage systems (goblets, canes, cassettes...) can be printed with various types of machine-readable codes.

Depending on the print object, the versatility of the MultiCoder extends to accommodating the printing of **QR-Codes**, a popular variant of 2D-Codes. QR-Codes can be conveniently scanned from multiple angles and directions, making them extremely user-friendly. In addition to standard readers, they can also be read with most smartphone cameras without the need to download an application.



Data security and traceability...



ID	NAME	UNIT	IN-DATE	DELIVERY	ASSIGNMENT	STATUS	ASSIGNMENT-DATE	VALIDATION	DATE	ASSIGNMENT
AM2079	156694HB	723	69237783	22.07.20xx						
AM2079	156746L	710	44237000	20.08.2014	20.07.2015	1	2000	1	1	22.04.2015
AM2079	156746R	710	44237000	19.08.2014	20.07.2015	1	2000	1	1	22.04.2015
AM2079	156746L	710	44237000	20.08.2014	20.07.2015	1	2000	1	1	22.04.2015
AM2079	156746R	710	44237000	20.08.2014	20.07.2015	1	2000	1	1	22.04.2015

...during production, storage and shipment