BIO CATALOG

Freeze Box & 2D Storage Tube

R0307 & R0307

Create technology to make significant contribution technology.

Knowing the existing technologies and understanding their purposes and mechanisms. Creation of untrodden fields of technology is backed by these approaches. It is our own technology. And our own strength

Dear Readers,

Kobe Bio Robotix 2D Storage Tubes have two-dimensional barcodes. This is a breakthrough technology we have developed with a view to the leading edge of a new era and are now introducing to the world.

2D Storage Tubes are manufactured to meet a wide variety of customer demands for biosample storage ranging from biobanks established for genetic information research and management, drug research, to compound libraries.

Factory Environment

In addition to our ISO-14644-1 compliant class 8 cleanroom, high-performance filters and static eliminators are effectively utilized for protection of products from particulate contamination.

Realization of contamination-free production environments

Product quality is maintained by the air conditioning system constantly operated at 23℃.

Machinery and Equipment

Injection Molding Machine
(50 t – 100 t) x10
Vertical Two-Color Injection Molding Machine
(150 t) x1
Horizontal Two-Color Injection Molding Machine
(230 t) x4
Automatic Assembly Machine
(House Products) x 20

CERTIFIED RNase DNase SAFE Pyrogen Free Endotoxin Free

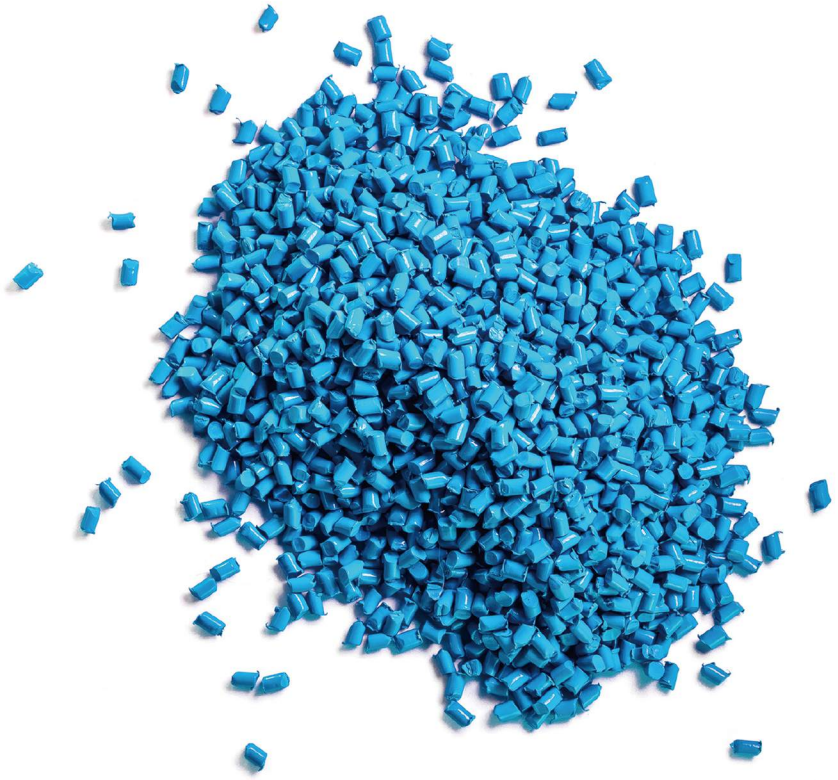
R0307 & R0307

KobeBioRobotix Co.,Ltd.

Plastic raw materials

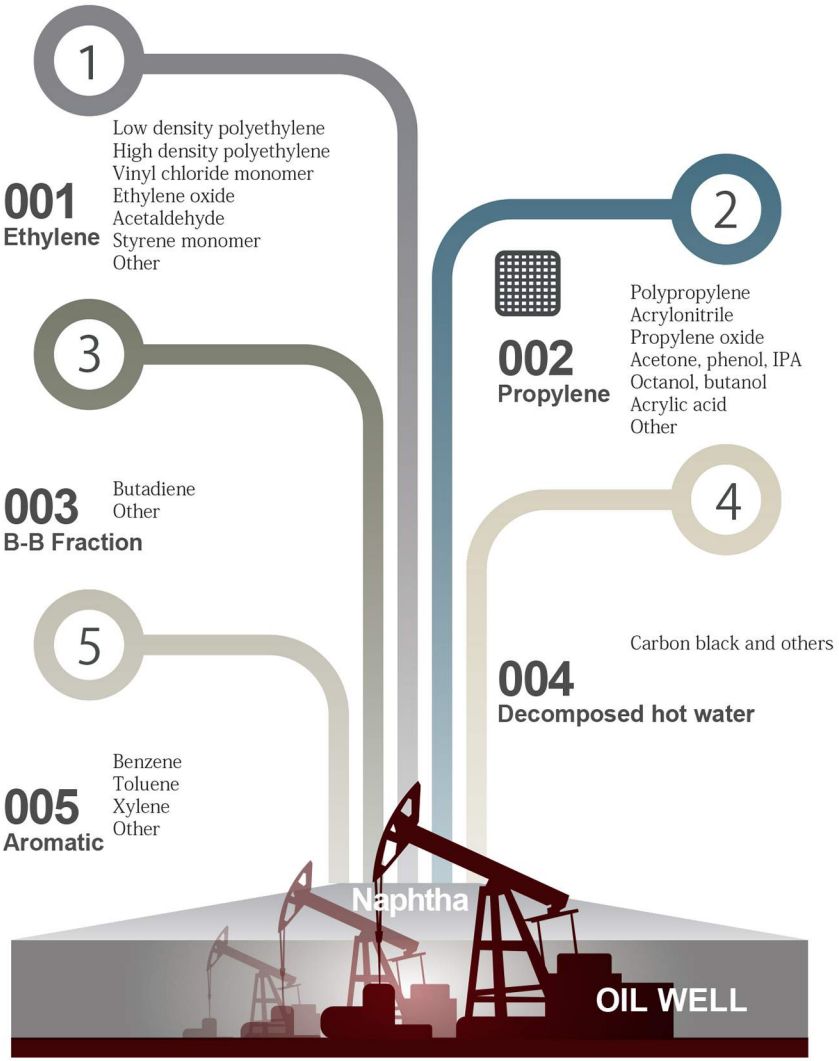
A principal component of molding materials is synthetic resin comprising bond polymers. The molding materials are used by adding and mixing various compounding agents.

*Soluble heavy metal pollutants and DNAs/RNAs free. DMSO resistant.



Plastic use about 3% of petroleum

Crude oil is a supply source of raw materials for plastic manufacturing.
There are various types of plastics and each type has both merits and demerits.
Selection of raw materials is based upon product characteristics. (PP/PS/PC/ABS/COC/TPE)
Every effort is made to know in what circumstances and how the products are used.
We are fully committed to ensuring the “knowledge”.




70098928
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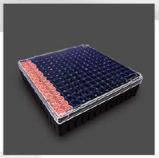
FluidX

Category management



01

Freeze Box

Freeze Box is built on general design while our original ideas have been crystalized in rack design.

100 (10 × 10) storable type and
196 (14 × 14) storable type.

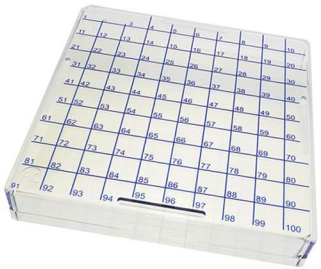
02

2D Storage Tube

Jacket Tubes (2D Storage Tubes), flagship model for Kobe Bio Robotix, are available in different capacities and sizes.

As compared with the existing tubes with a fitted jacket, introduction of two-color injection molding equipment has improved usability of tubes by eliminating the uneven surface in level between the Jacket and the tube.

Freeze BOX 100 (10*10)



Tube rack used for cryopreservation of biosamples.
Round holes at the bottom of the tube rack are intended to facilitate reading of 2D barcodes located at the bottom of the tubes at one time.

※Compatible tubes: Cryo1.5ml　Cryo2.0ml

Sample tubes evolved into co-injection molding　technology have simultaneously realized barcode-based sample management and visualization of samples in storage tubes.

Tube sizes are fitted to third-party tube racks(See Page 28)

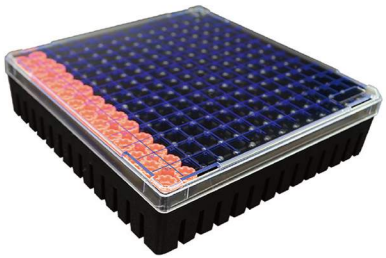
Storage space for 100 tubes.
Usable in liquid nitrogen vapor phase.

Lid・bottom:polycarbonate
Numbers and letters is attached to each hole.
External dimensions 136.2mm×136.2mm×(H)52.6mm

Specifications	Quantity
Empty rack	10units
Empty rack 1D bar-code	10units

Freeze BOX 196 (14*14)

Storage space available for 196 tubes in 96-well format. Realizes cryopreservation of ever-increasing biospecimens.

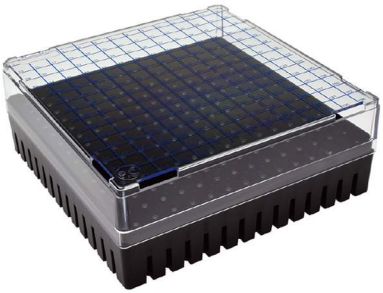


Lid・bottom:polycarbonate
Numbers and letters is attached to each hole.
External dimensions 136.2mm×136.2mm×(H)34.1mm

Specifications	Quantity
Empty rack	10units
Empty rack 1D bar-code	10units

Lid・bottom:polycarbonate
Numbers and letters is attached to each hole.
External dimensions 136.2mm×136.2mm×(H)46.8mm

Specifications	Quantity
Empty rack	10units
Empty rack 1D bar-code	10units



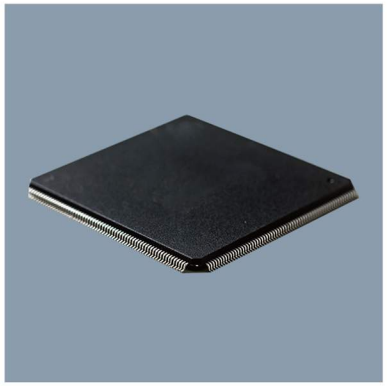
Lid・bottom:polycarbonate
Numbers and letters is attached to each hole.
External dimensions 136.2mm×136.2mm×(H)52.6mm

Specifications	Quantity
Empty rack	10units
Empty rack 1D bar-code	10units

Have you ever experienced a case in which the information of research specimens directly handwritten on sample tubes gets blurry before the ink dries or such information turns to be unreadable during long-term storage?

Have you ever been in trouble by a case where all or part of the labels affixed on sample tubes are peeled off ?

Small tubes have limited space for information writing and are subject to concerns over storage and to reduced workability due to time-consuming tube retrieval from a tube rack. Jacket Tubes solve such concerns.

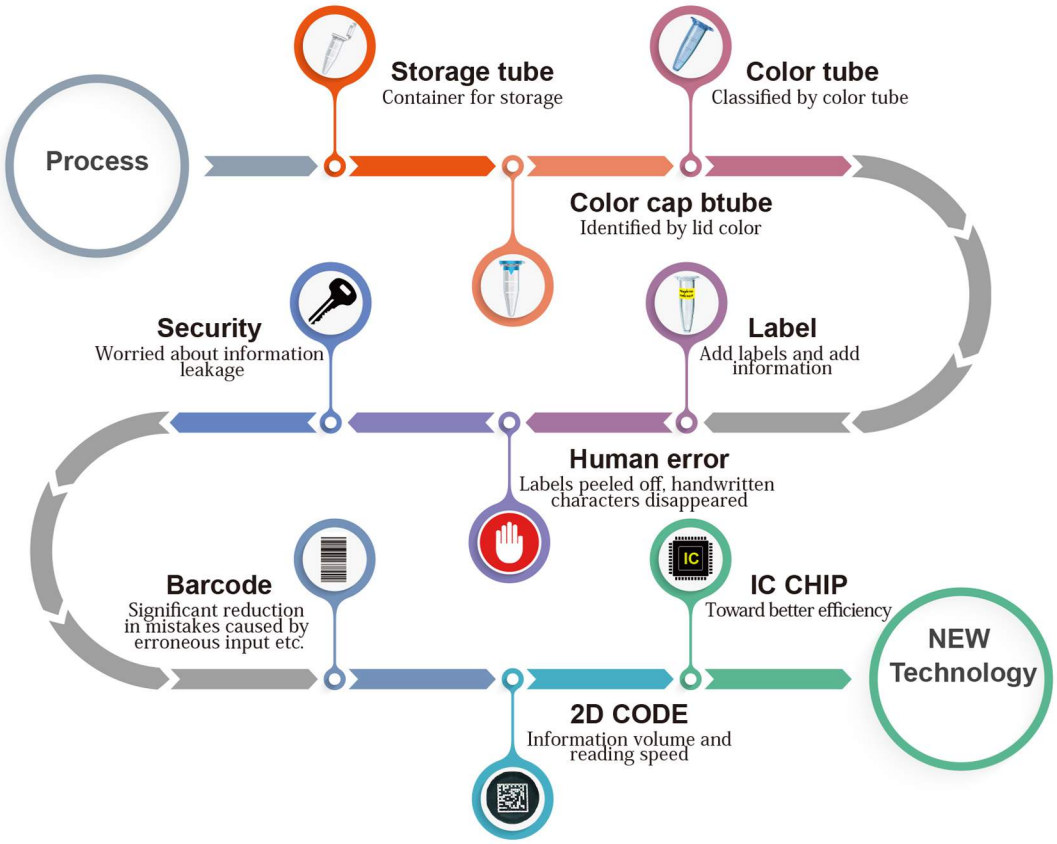


2D and 1D barcode information on a tube is scanned using a scanner and the information is managed by PC. It is possible to read the address number within a rack and quickly retrieve intended sample tubes. This approach is effective for the sample stores operated mainly by a robot-controlled, auto-picking system.

Our sample tubes have been developed by endless challenges to storage tube risk management (loss of information) and should have a competitive advantage as compared to competing products of overseas companies.

Evolution of storage tube

For a brighter future with 2D Storage Tubes, and for secure and reliable researches!



2D storage tube

2 color molding

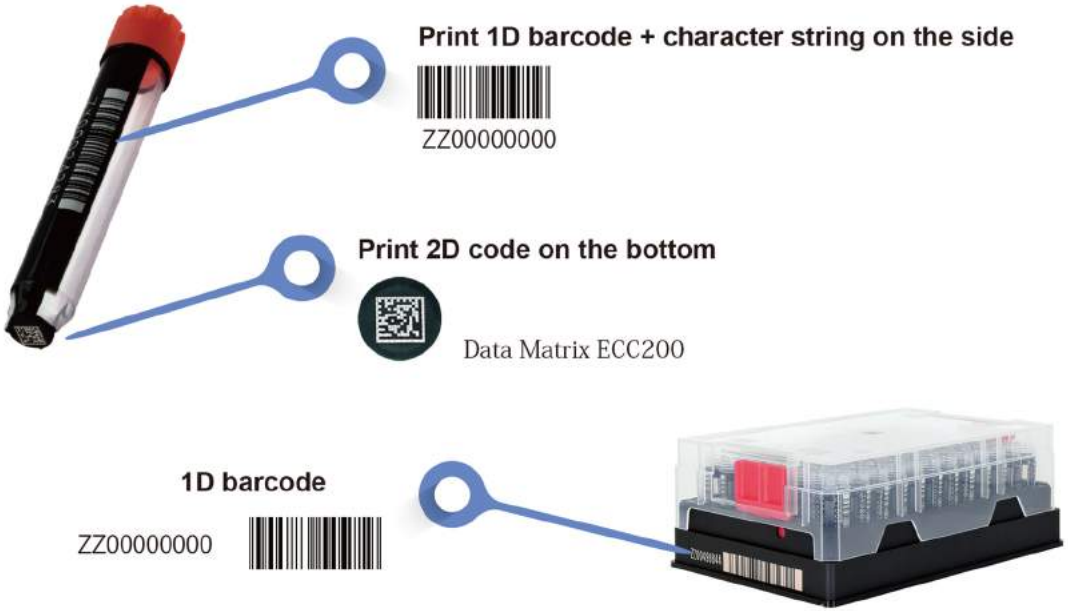
Speedy, reliable and safe sample management with 2D code added tube

Laser-based treatment is conducted for three-types of expressions (1D barcode, 2D barcode and human readable number).

As 2D barcode represents the information using two-dimensional graphic patterns, it is possible to write information in an area smaller than a barcode.

Since a 2D code is printed on the bottom and the information is printed using 1D barcode and alpha-numerical characters on the tube side, it is possible to read the information with a barcode reader without tilting sample tubes and to obtain the information without giving stress to samples.

Even the stains or losses observed by 10 to 30% of a 2D barcode may be recovered and turn to be readable by a feature of data recovery.



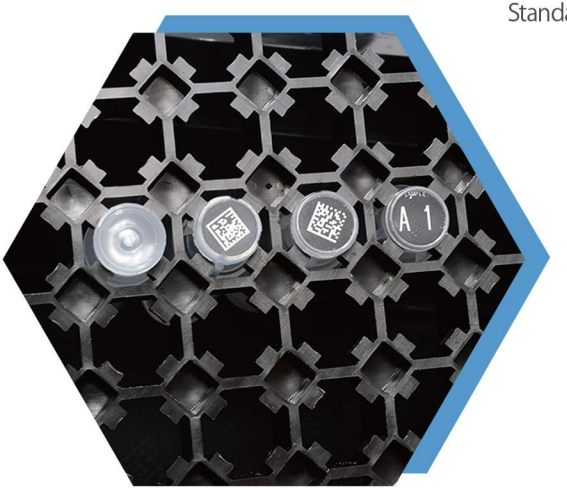
2Code

Data Matrix ECC200

2D Code Quality

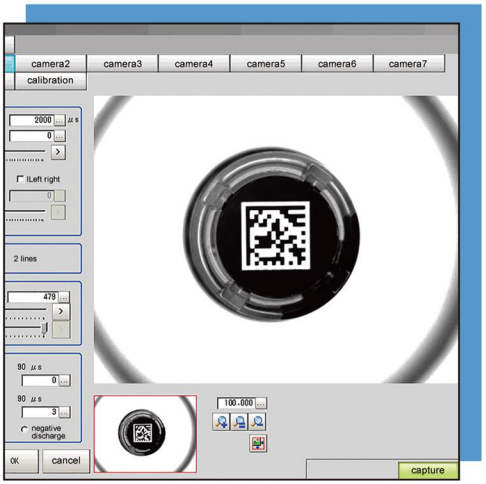
The quality of Data Matrix ECC200 is evaluated and analyzed based on the "ISO/IEC TR29158:2011 Direct Part Mark (DPM) Quality Guideline" and the "ISO/IEC 16022 Data Matrix bar code symbology specification".

Standard code sizes: 14×14 cells



Code Bank

The codes applied to products are issued and managed by the Code Bank System developed by Kobe Bio Robotix.
As the System prevents duplication of codes and accumulates any and all information from production to delivery, product information traceability management in part units is enabled.



0.3ML Co-mold Tubes

External Type

Capacity available 0.3 ml

0.3ml

Rack size-127.8 x 85.5x22.0
Tube size-18.6 x ⌀ 8.7

JT-03-EX

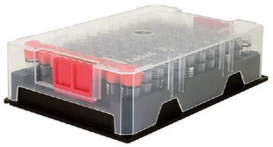
Specifications	Quantity
Bulk Tubes	960units
Racked	96units ×10racks
Bulk Caps	960units
Empty rack	10racks

0.5ML Co-mold Tubes

External Type

Capacity available 0.5 ml

0.5ml



Rack size-127.8 x 85.5x32.9
Tube size-29.8 x ⌀ 8.7

JT-W0.5-EX

Specifications	Quantity
Bulk Tubes	960units
Racked	96units × 10racks
Bulk Caps	960units
Empty rack	10racks

Internal Type

Capacity available 0.5ml

0.5ml

Rack size-127.8 x 85.5x38.0
Tube size-33.9 x ⌀ 8.6

JT-W0.5-IN

Specifications	Quantity
Bulk Tubes	960units
Racked	96units × 10racks
Bulk Caps	960units
Empty rack	10racks

0.7ML Co-mold Tubes

Internal Type

Capacity available 0.7ml

0.7ml

Rack size-127.8 x 85.5x50.8
Tube size-45.1 x Ø 8.6

JT-W0.7-IN

Specifications	Quantity
Bulk Tubes	960units
Racked	96units ×10racks
Bulk Caps	960units
Empty rack	10racks

1.0ML Co-mold Tubes

External Type

Capacity available 1.0ml

1.0ml

Rack size-127.8 x 85.5x53.2
Tube size-49.6 x ⌀ 8.7

JT-W1.0-EX

Specifications	Quantity
Bulk Tubes	960units
Racked	96units ×10racks
Bulk Caps	960units
Empty rack	10racks

Internal Type

Capacity available 1.0ml

1.0ml

Rack size-127.8 x 85.5x61.8
Tube size-52.5 x ⌀ 8.6

JT-W1.0-IN

Specifications	Quantity
Bulk Tubes	960units
Racked	96units ×10racks
Bulk Caps	960units
Empty rack	10racks

1.5ML 2.0ML

Co-mold Tubes

External Type

Capacity available 1.6 ml

1.5ml

Rack size-127.8 x 85.5x49.4
Tube size-36.3 x Ø 12.8

JT-CRYO1.5-EX

Specifications	Quantity
Bulk Tubes	480units
Racked	48units ×10racks
Bulk Caps	480units
Empty rack	10racks

External Type

Capacity available 2.0 ml

2.0ml

Rack size-127.8 x 85.5x49.4
Tube size-43.9 x Ø 12.8

JT-CRYO2.0F-EX

Specifications	Quantity
Bulk Tubes	480units
Racked	48units ×10racks
Bulk Caps	480units
Empty rack	10racks

4.0ML Co-mold Tubes

External Type

Capacity available 4.1ml

4.0ml

Rack size-127.8 x 85.5x86.2
Tube size-80.7 x ⌀ 12.8

JT-CRYO4.0L-EX

Specifications	Quantity
Bulk Tubes	480units
Racked	48units × 10racks
Bulk Caps	480units
Empty rack	10racks

6.0ML Jacket Tubes

ExternalType

Capacity available 5.4ml

6.0ml

Rack size-127.8 x 85.5x66.5
Tube size-62.6 x ø 17.0

TU-JT6.0 +JA-6.0-EX

Specifications	Quantity
Bulk Tubes	240units
Racked	24units × 10racks
Bulk Caps	240units
Empty rack	10racks

10.0ML Co-mold Tubes

External Type

Capacity available 8.1ml

10.0ml

Rack size-127.8 x 85.5x88.5
Tube size-83.6 x Ø 17.0

JT-10.0-EX

Specifications	Quantity
Bulk Tubes	240units
Racked	24units ×10racks
Bulk Caps	240units
Empty rack	10racks

6.0μL Non-Jacket Tubes

384 Type

Capacity available 0.1 ml

0.1ml

Rack size-127.8 x 85.5x23.0
Tube size-14.0 x 4.4

2D-384 R/SQ

Specifications	Quantity
Racked	384units × 10racks
Empty rack	10racks

200 μL Non-Jacket Tubes

External Type

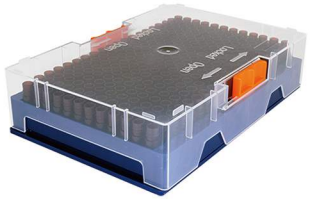
Capacity available 0.2 ml

0.2ml

Rack size-127.8 x 87.2x32.0
Tube size-27.2 x ⌀5.8

TU-OS240-EX

Specifications	Quantity
Bulk Tubes	2400units
Racked	240units ×10racks
Bulk Caps	2400units
Empty rack	10racks



Certificate of quality

Product:

RNase / DNase Free:
This is to certify that this products are RNase / DNase free.
We perform a periodic test defined in our quality management system.

Endotoxin (pyrogen) Free:
It is certified that this product contains no endotoxin (pyrogen).
We perform a periodic test defined in our quality management system.

PCR inhibitor Free:
We certify that our products are PCR-inhibitor free.
We perform a periodic test defined in our quality management system.

Heavy Metal Free:
We certify that heavy metal(Lead/Cadmium/Mercury/Hexavalent
in our products and meets CONEG requirements.*2

Animal Free Statement (TSE/BSE):
We certify that our products are not manufactured from
of animal origin.*2

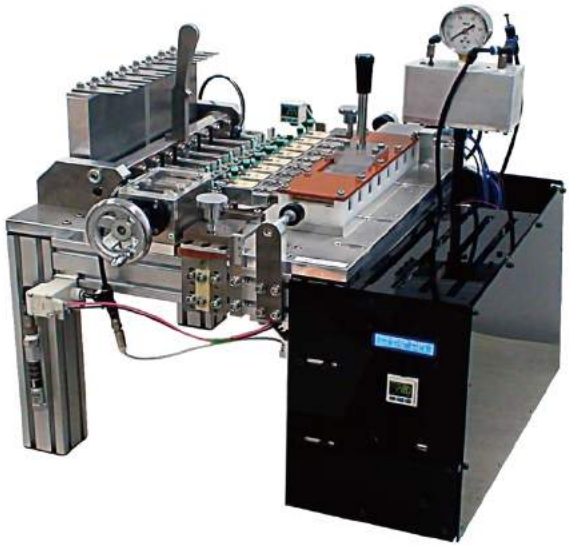
*1 The content of this specification is current as
*2 This certificate has been prepared on the b
and subcontractors related to the target
ived as of the date described abov
tablishment and/or abolition

Quality Management

Various inspection methods are employed in all manufacturing processes to ensure the quality of products. This approach enables exclusion of products and/or parts below our quality standards from the production lines.

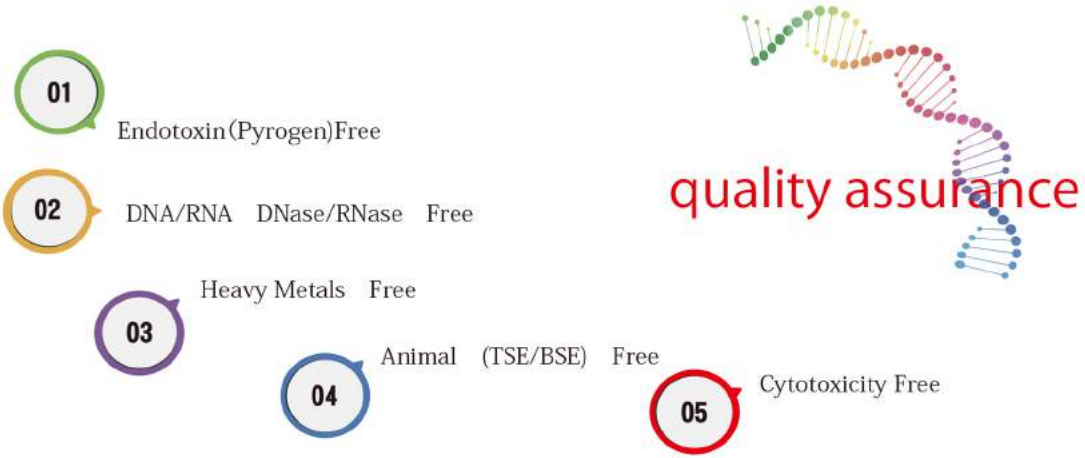
Molded product inspection

Visual inspection
Fitting performance inspection (Threading, leakage *1)
Dimensional inspection
Laser marked product inspection
Bioburden value measurement
Elution testing

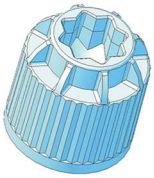
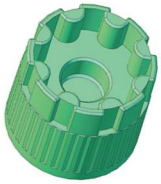


※ 1)Air Tightness Testing(ALD)

Air tightness is tested based on the "JIS Z2332 Leak Testing Method using Pressure Change" with a tester (as shown by the image) to pressurize the internal tube. High level of airtightness conforming to the "IATA Dangerous Goods Regulations PI602/650" is confirmed.



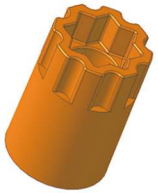
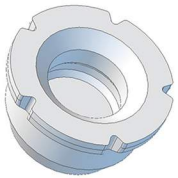
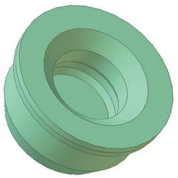
Cap Range Summary

				
KBR Name	Screw Cap-96	Screw Cap-96	Screw Cpa-48	Screw Cap-24
Shape	External	Internal	External	External
Type	Single/carrier	Single/carrier	Single cap	Single cap
Material	PP	PP + TPE	PP	PP
Min Temperature (℃)	-196	-196	-196	-196
Color	11 different colors	11 different colors	10 different colors	11 different colors

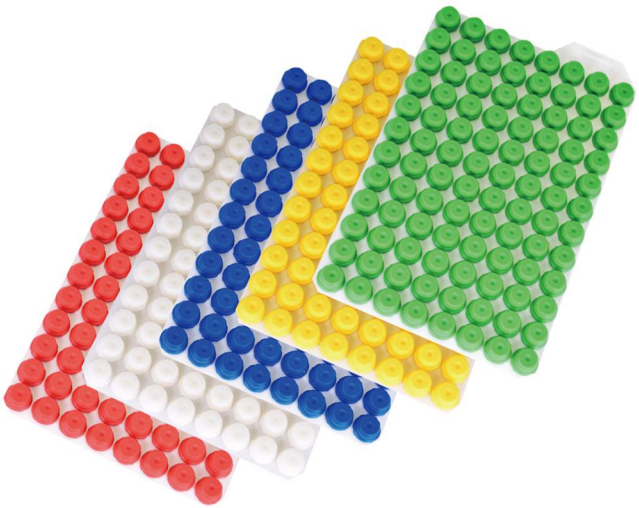
Screw Cap-96 Internal

Screw Cap-96 External

Screw Cap-48 External

				
384-Cap	Screw Cap-240	Septum Cap	Septum Cap	Air Film
—	External	External	Internal	—
Racked cap	Single cap	Single + Mat of 96 caps	Single + Mat of 96 caps	Sealed of 96 caps
PP	PP	TPE	TPE	Aluminum + PET
-196	-196	-196	-196	-196
1 color	2 different colors	1 color	5 different colors	1 color

Mat of 96 caps



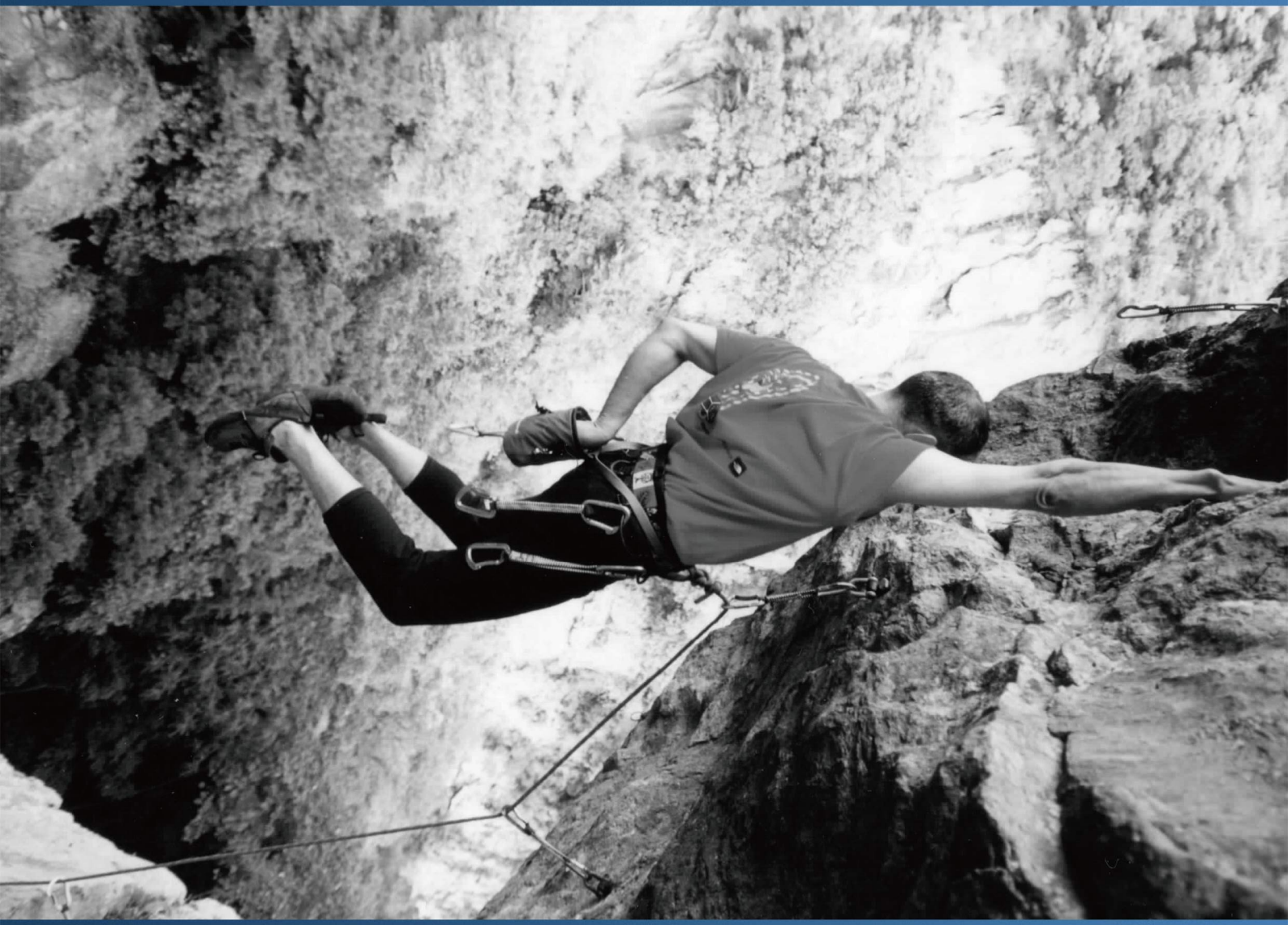
Mat of 96 caps External

Tube Range Summary

					
KBR Name	JT-0.3-EX	JT-W0.5-EX	JT-W0.5-IN	JT-W0.7-IN	JT-W1.0-EX
Type	co-mold	co-mold	co-mold	co-mold	co-mold
Volume (ml)	0.38	0.73	0.78	1.06	1.28
Max Working Volume (ml) Septum / Screw	0.25	0.45 / 0.55	0.45 / 0.50	0.70 / 0.75	0.85 / 1.05
Tube Height (mm)	15.2	26.4	25.63	36.8	46.2
Tube Height with Cap (mm) Septum / Screw	18.6	27.6 / 29.8	26.8 / 33.88	38.0 / 45.0	47.4 / 49.6
Inner Diameter (mm)	6.5	6.5	6.8	6.8	6.5
Outer Diameter (mm)	8.5	8.7	8.3	8.4	8.7
Center to Center (mm)	9.0	9.0	9.0	9.0	9.0
Min Temperature (℃)	-196	-196	-196	-196	-196
2D Coded	○	○	○	○	○
2D Code Color	White/Black	White/Black	White/Black	White/Black	White/Black
Linear Barcode	×(2D)	○	○	○	○
Human readable	○	○	○	○	○
Non-Coded Option	×	×	×	×	×
Capping type	Screw	Septum + Screw	Septum + Screw	Septum + Screw	Septum + Screw
Thread type	External	External	Internal	Internal	External
Quantity in Rack	96	96 / 196	96 / 196	96 / 196	96 / 196

							
JT-W1.0-IN	JT-CRYO1.5-EX	JT-CRYO2.0F-EX	JT-CRYO4.0L-EX	TU-JT6.0+JA-6.0-EX	JT-10.0-EXi	2D-384 R/SQ	TU-OS240-EX
co-mold	co-mold	co-mold	co-mold	Jacket	co-mold	Non-Jacket	Non-Jacket
1.33	1.96	2.46	4.7	6.6	9.6	0.11/0.12	0.25
0.90 / 1.00	1.6	2.0	4.1	5.45	8.1	0.06/0.09	0.21
44.2	30.6	38.2	75.0	56.4	77.41	14.0	24.1
45.4 / 52.4	36.3	43.9	80.7	62.6	83.6	16.9	27.5
6.8	9.63	9.63	9.63	13.1	13.11	3.6	3.9
8.4	12.8	12.8	12.7	17.0	17.0	4.4	5.8
9.0	13.5	13.5	13.5	18.0	18.0	4.5	6.0
-196	-196	-196	-196	-196	-196	-100	-100
○	○	○	○	○	○	○	○
White/Black	White/Black	White/Black	White/Black	White/Black	White/Black	White	White/Black
○	○	○	○	○	○	×	×
○	○	○	○	○	○	×	×
×	×	×	×	×	×	×	×
Septum + Screw	Screw	Screw	Screw	Screw	Screw	Septum	Screw
1Internal	External	External	External	External	External	————	External
96 / 196	48 /100	48 / 100	48	24	24	384	240

Today is invitations for tomorrow Standard.



New Ideas for 2D Storage Tube

New product development process

Understanding customer needs

Product development and design process

Quality development process

Quality policy → Quality objectives → QMS plan → Management review

Review

Projects under development

Manufacturing Policies

- The use of products changes. The concept of quality changes. Establish the management system flexible to any changes.
- Make every effort to obtain knowledge and fully commit to ensuring the “knowledge”.
- Should think about for what purpose the products are used after leaving from our hands and how they reach their end of life.
- There is no need to produce the things that are highly technological or convenient! Commit to manufacturing the products that are appropriate and suitable for the objectives.
- Customer satisfaction is not always the top priority. There are a variety of products and customers, and there are many choices! Aim for “Monozukuri (Manufacturing)” to share our hopes for the future.
  Today is invitations for tomorrow standard !

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