## eppendorf



# The 360° Evolution

Eppendorf Combitips® advanced

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#### Time for a New Original!

The invention of the Repeater/Combitips system marked a milestone in the field of Liquid Handling. Executing long pipetting and dispensing series became remarkably simpler and faster while more reproducible results could be achieved when dealing with viscous, volatile or other challenging liquid types. With innovative sensor technology for automatic tip recognition, the Repeater/Combitips system has become an indispensable tool for every laboratory.

Eppendorf experts have thoroughly optimized the Combitips plus dispenser tips to meet new demands of modern laboratories. The result: Combitips advanced – a 360° evolution with a variety of advantages in comparison to their predecessor Combitips plus.

#### The »Combitips« principle

- > Positive displacement principle (comparable to a syringe)
- > High-precision dispensing regardless of the density and viscosity of the liquid
- > Prevents aerosol contamination with hermetically sealed piston for secure dispensing and provides protection from radioactive and toxic substances
- > Quick dispensing of long series with precise, repeated dispensing of identical volumes (together with the Repeater®)

#### Product page: www.eppendorf.com/combitips



### Unmistakable Down to the Last Detail



Intelligent packaging

A perfect team

With the redesigned dispenser box (for »Eppendorf Quality« and PCR clean) with extricable chute, Combitips advanced are always within reach. Portioning in 4 bags (25 pcs. each) ensures dust-free storage.



Unmistakably Eppendorf

Combitips advanced feature the characteristic Eppendorf 3D design on the upper rim of the dispenser tip, allowing you to easily and confidently recognize the Eppendorf Original!



#### Variety and selection

With 9 volume sizes (0.1 mL to 50 mL) and 5 purity grades (Eppendorf Quality, PCR clean, Sterile, Biopur® and Forensic DNA Grade) you will always find the perfect Combitip for your application! The »Biopur« tips are individually blister-wrapped and feature an access tab which makes them easier to open, even with gloves!

Repeater M4 or older models – Combitips advanced are optimized for all Repeater variants to create the perfect connection!

Whether you are using the Repeater E3x,



Always easy to reach

The Combitips advanced Box 2.0 features trouble-free and single-hand operation. The autoclavable box holds up to 8 Combitips advanced in sizes ranging from 0.1 mL to 10 mL. The transparent tray allows for the sizes of the Combitips to be easily identified using the color coding.

Additional information on Repeater multi-dispenser pipettes can be found online: www.eppendorf.com/m4 www.eppendorf.com/e3

| Combitips advanced®                            | Min./max.<br>volume  | Increment/<br>step size | Volume          | Systema   | Systematic error*1 |        | Random error*1 |  |  |  |
|--|----------------------|-------------------------|-----------------|-----------|--------------------|--------|----------------|--|--|--|
| for Repeater E3x and Combitips advanced system |                      |                         |                 |           |                    |        |                |  |  |  |
| 0.1 mL   | 1 μL                 | 0.1 μL                  | 1μL 50          | μL ±11.0% | ±1.0%              | ±14.0% | ±1.5%          |  |  |  |
|  | 100 μL               |                         | 10 μL 100       | μL ±1.6%  | ±1.0%              | ±2.5%  | ±0.5%          |  |  |  |
| ).2 mL   | 2 μL                 | 0.2 μL                  | 2 μL 100        | μL ±4.0%  | ±1.0%              | ±5.5%  | ±1.0%          |  |  |  |
|  | 200 μL               |                         | 20 μL 200       |           | ±1.0%              | ±1.5%  | ±0.5%          |  |  |  |
| ).5 mL   | 5 μL                 | 0.5 μL                  | 5 μL 250        | μL ±3.0%  | ±0.9%              | ±6.0%  | ±0.5%          |  |  |  |
|  | 500 μL               |                         | 50 μL 500       | μL ±0.9%  | ±0.9%              | ±0.8%  | ±0.3%          |  |  |  |
| 1 mL   | 10 μL                | 1 μL                    | 10 μL 500       | μL ±3.5%  | ±0.6%              | ±7.0%  | ±0.30%         |  |  |  |
|  | 1 mL                 |                         | 100 μL 1,000    | μL ±0.9%  | ±0.6%              | ±0.55% | ±0.20%         |  |  |  |
| 2.5 mL   | 25 μL                | 2.5 μL                  | 25 μL 1,250     | μL ±2.0%  | ±0.5%              | ±3.5%  | ±0.30%         |  |  |  |
|  | 2.5 mL               |                         | 250 μL2,500     | μL ±0.8%  | ±0.5%              | ±0.45% | ±0.15%         |  |  |  |
| 5 mL   | 50 μL                | 5 μL                    | 50 μL 2,500     | μL ±2.5%  | ±0.50%             | ±6.0%  | ±0.25%         |  |  |  |
|  | 5 mL                 |                         | 500 μL 5,000    | μL ±0.8%  | ±0.50%             | ±0.35% | ±0.15%         |  |  |  |
| 10 mL  | 100 μL               | 10 μL                   | 100 μL 5,000    | μL ±1.5%  | ±0.4%              | ±3.5%  | ±0.25%         |  |  |  |
|  | 10 mL                |                         | 1,000 μL 10,000 | μL ±0.5%  | ±0.4%              | ±0.25% | ±0.15%         |  |  |  |
| 25 mL  | 250 μL               | 25 μL                   | 250 μL 12,500   | μL ±2.5%  | ±0.3%              | ±3.0%  | ±0.25%         |  |  |  |
|  | 25 mL                |                         | 2,500 μL 25,000 | μL ±0.3%  | ±0.3%              | ±0.35% | ±0.15%         |  |  |  |
| 50 mL  | 500 μL               | 50 μL                   | 500 μL 25,000   | μL ±2.0%  | ±0.3%              | ±3.0%  | ±0.20%         |  |  |  |
|  | 50 mL                |                         | 5,000 μL 50,000 | μL ±0.3%  | ±0.3%              | ±0.50% | ±0.15%         |  |  |  |
| or Repeater M4 and Combi                       | tips advanced system |                         |                 |           |                    |        |                |  |  |  |
| ).1 mL   | 1 μL                 | 1 μL                    | 1μL 10          | μL ±8.0%  | ±1.2%              | ±13.0% | ±2.4%          |  |  |  |
|  | 20 µL                |                         | 2 μL 20         | μL ±1.6%  | ±1.0%              | ±3.0%  | ±2.0%          |  |  |  |
| ).2 mL   | 2 μL                 | 2 μL                    | 2 μL 10         | μL ±6.0%  | ±0.8%              | ±8.0%  | ±1.5%          |  |  |  |
|  | 40 µL                |                         | 4 μL 40         | μL ±1.3%  | ±0.8%              | ±2.0%  | ±1.5%          |  |  |  |
| ).5 mL   | 5 μL                 | 5 μL                    | 5 μL 50         | μL ±4.0%  | ±0.8%              | ±8.0%  | ±0.8%          |  |  |  |
|  | 100 μL               |                         | 10 μL 100       | μL ±0.9%  | ±0.8%              | ±1.5%  | ±0.6%          |  |  |  |
| l mL   | 10 μL                | 10 μL                   | 10 μL 100       | μL ±4.0%  | ±0.6%              | ±8.0%  | ±0.6%          |  |  |  |
|  | 200 μL               |                         | 20 μL 200       | μL ±0.9%  | ±0.6%              | ±0.9%  | ±0.4%          |  |  |  |
| 2.5 mL   | 25 μL                | 25 μL                   | 25 μL 250       | μL ±4.0%  | ±0.6%              | ±8.0%  | ±0.6%          |  |  |  |
|  | 500 μL               |                         | 50 μL 500       | μL ±0.8%  | ±0.5%              | ±0.8%  | ±0.3%          |  |  |  |
| 5 mL   | 50 μL                | 50 μL                   | 50 μL 500       | μL ±3.0%  | ±0.5%              | ±5.0%  | ±0.5%          |  |  |  |
|  | 1,000 μL             |                         | 100 μL 1,000    | μL ±0.6%  | ±0.5%              | ±0.6%  | ±0.25%         |  |  |  |
| 10 mL  | 100 µL               | 100 μL                  | 100 μL 1,000    | μL ±3.0%  | ±0.5%              | ±4.0%  | ±0.4%          |  |  |  |
|  | 2,000 μL             |                         | 200 μL 2,000    | μL ±0.5%  | ±0.5%              | ±0.6%  | ±0,25%         |  |  |  |
| 25 mL  | 250 μL               | 250 μL                  | 250 μL 2,500    |           | ±0.3%              | ±3.0%  | ±0.5%          |  |  |  |
|  | 5,000 μL             | -                       | 500 μL 5,000    |           | ±0.3%              | ±0.6%  | ±0.25%         |  |  |  |
| 50 mL  | 500 μL               | 500 μL                  | 500 μL 5,000    | μL ±6.0%  | ±0.3%              | ±10.0% | ±0.5%          |  |  |  |
|  | 10,000 μL            | -                       | 1,000 μL 10,000 | μL ±0.3%  | ±0.3%              | ±0.5%  | ±0.25%         |  |  |  |

#### Compatibility of Combitips advanced with standard laboratory tubes

| Combitips<br>advanced | Eppendorf Safe-Lock Tubes |        |        |        | Conical tubes |       |       | Eppendorf Deepwell Plates |                      |                      |                      |
|-----------------------|---------------------------|--------|--------|--------|---------------|-------|-------|---------------------------|----------------------|----------------------|----------------------|
|                       | 0.5 mL                    | 1.5 mL | 2.0 mL | 5.0 mL | 15 mL         | 25 mL | 50 mL | 96 wells/<br>500 μL       | 96 wells/<br>1000 μL | 96 wells/<br>2000 μL | 384 wells/<br>200 μL |
| 0.1 mL                | +                         | +      | +      | +      | _             | _     | _     | +                         | +                    | +                    | +                    |
| 0.2 mL                | +                         | +      | +      | +      | -             | _     | -     | +                         | +                    | +                    | +                    |
| 0.5 mL                | +                         | +      | +      | +      | -             | -     | -     | +                         | +                    | +                    | -                    |
| 1 mL                  | +                         | +      | +      | +      | -             | +     | -     | +                         | +                    | +                    | -                    |
| 2.5 mL                | +                         | +      | +      | +      | +             | +     | +     | +                         | +                    | +                    | -                    |
| 5 mL                  | +                         | +      | +      | +      | +             | +     | +     | +                         | +                    | +                    | -                    |
| 10 mL                 | +                         | +      | +      | _      | _             | +     | +     | +                         | +                    | +                    | _                    |
| 25 mL                 | -                         | +      | +      | _      | _             | _     | _     | +                         | +                    | +                    | _                    |
| 50 mL                 | -                         | +      | +      | -      | _             | _     | _     | +                         | +                    | +                    | _                    |

 $\pm$  = improved compatibility compared to the Combitip plus generation

### The Third Dimension of Tip Technology



**Repeater connection** Automatic Combitip recognition and volume calculation



**Ergonomic design** Unique funnel geometry prevents damage to gloves and ensures comfortable handling



#### Individually color coded

Quick identification of the desired Combitips facilitates the workflow (color coding is also visible on packaging)



Elongated tips (for 2.5 mL, 5 mL and 10 mL)

Complete emptying of all common tubes prevents sample loss (see table on page 4)



**Optimized graduation** Visibility of liquid volume using optimized graduations



Made of virgin polypropylen Free of slip agents, biocides and plasticizers.



# eppendorf

#### Ordering information Eppendorf Quality Forensic DNA Grade Combitips® advanced Color code Sterile Biopur<sup>®\*2</sup> PCR clean\*1 100 pcs., 100 pcs., 4 bags 100 pcs., 4 bags 100 pcs., 100 pcs., (4 bags x 25 pcs.) (zip-lock) x (zip-lock) x (individually (individually 25 pcs. 25 pcs. wrapped) wrapped) 0030 089 405 0030 089 766 0030 089 510 0030 089 618 0.1 mL white 0.2 mL light blue 0030 089 413 0030 089 774 0030 089 529 0030 089 626 0.5 mL violet 0030 089 421 0030 089 782 0030 089 537 0030 089 634 0030 089 430 0030 089 790 0030 089 545 0030 089 642 0030 089 855 1.0 mL yellow 2.5 mL 0030 089 448 0030 089 804 0030 089 553 0030 089 650 0030 089 863 green 5.0 mL blue 0030 089 456 0030 089 812 0030 089 561 0030 089 669 0030 089 871 0030 089 464 0030 089 820 0030 089 570 0030 089 677 10 mL orange 25 mL\*3 0030 089 839 0030 089 588 0030 089 685 red 0030 089 472 50 mL\*3 0030 089 693 0030 089 847 0030 089 596 0030 089 480 light gray ViscoTip® orange 10 mL 0030 089 502 Accessories Adapter advanced 25 mL, autoclavable, 1 piece 0030 089 715 red 25 mL, autoclavable, 7 pcs., red 0030 089 731 individually wrapped light gray 50 mL, autoclavable, 1 piece 0030 089 723 0030 089 740 50 mL, autoclavable, 7 pcs., light grav individually wrapped 0030 089 952 Combitips® advanced Box 2.0, for 8 Combitips<sup>®</sup> advanced (0.1 - 10 mL), Eppendorf Quality, 1 piece Combitips<sup>®</sup> advanced Assortment Pack, 0030 089 936 contains one Combitips® advanced sample of each size and Adapter advanced 25 and 50 mL, Eppendorf Quality

\*1 PCR clean: batch tested and certified to be free of: human DNA, DNase, RNase, PCR inhibitors
\*2 Eppendorf Biopur<sup>®</sup>: batch tested and certified to be sterile and free of: human and bacterial DNA, DNase, RNase, PCR inhibitors, ATP, pyrogen
\*3 4 boxes of 25 pcs. each. Each box contains an adapter

For more information, technical specifications and article numbers of the corresponding Repeater multi-dispensers, visit www.eppendorf.com/m4 for Repeater M4 and www.eppendorf.com/e3 for Repeater E3/E3x electronic devices.

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