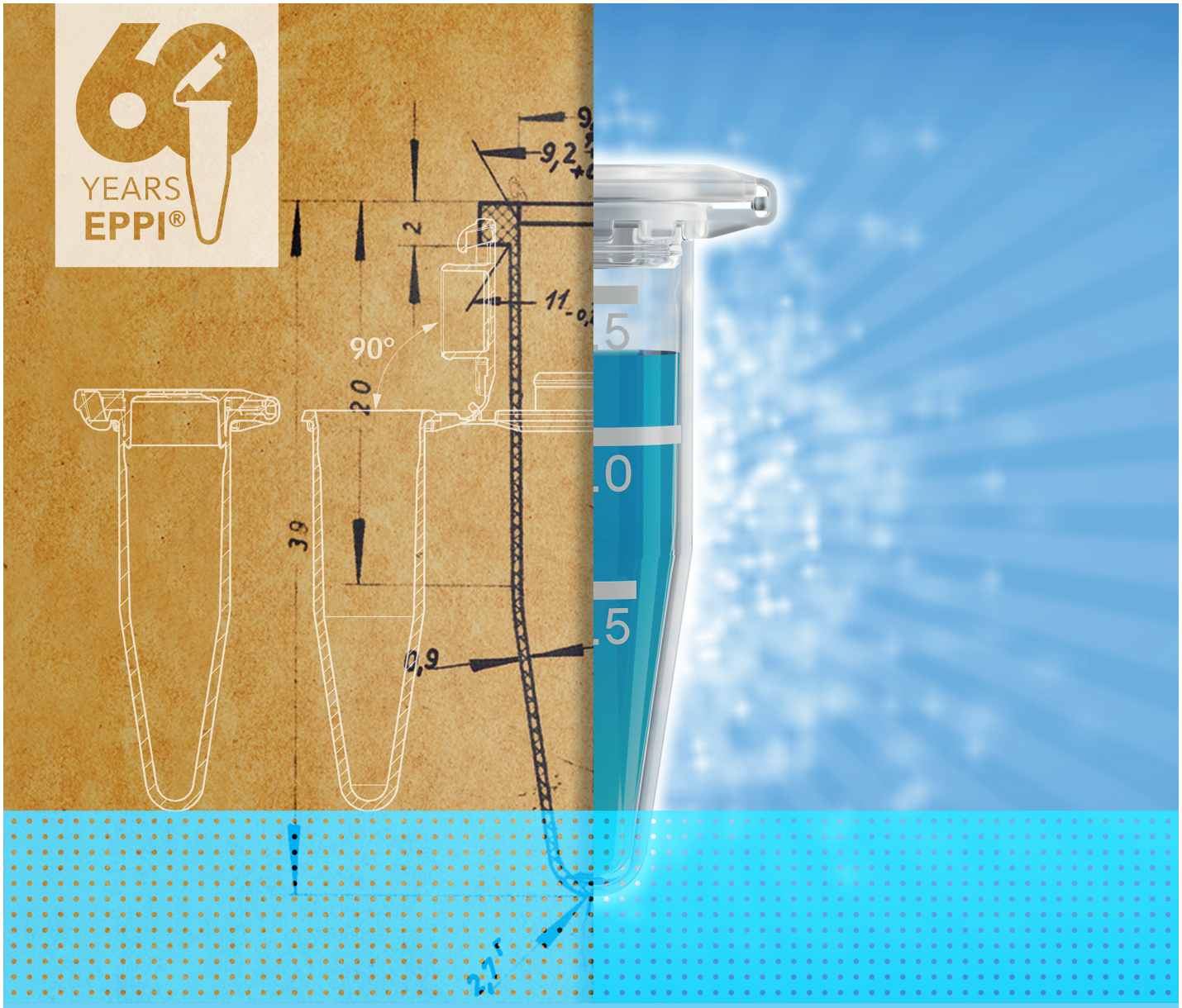
eppendorf



Beyond Generations

60th anniversary of the Eppendorf Tubes®

1963 saw the invention of the lava lamp, cassette tapes and push-button telephones. However, one invention in particular - the first Eppendorf Tube, which is affectionately termed the "Eppi®" - shook the world of science, establishing itself as a renowned laboratory consumable worldwide. Find out how the Eppi® and the following Eppendorf tube models have revolutionized scientific experiments and life in the laboratory over the past 60 years.

60 Years of Eppi®

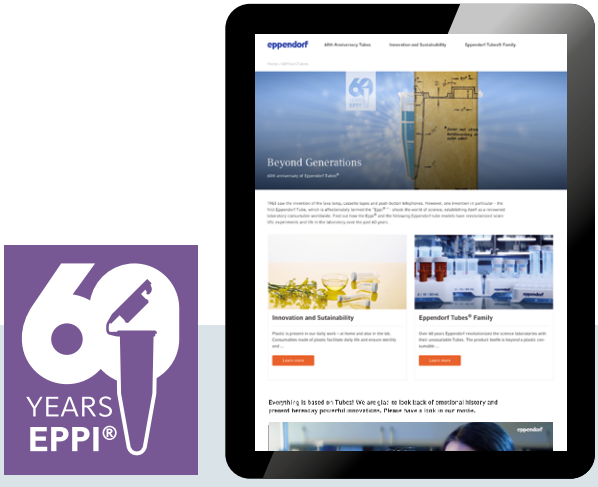
Lab innovations over the past six decades have facilitated extraordinary scientific discoveries. Eppendorf has been at the forefront of these innovations, developing an extensive range of industry leading equipment and consumables that are now staple items for every scientist's lab bench. Last year, we celebrated the 60th anniversary of the Eppendorf piston-stroke pipette, which was the first of its kind to be developed.

Read our article on the historical milestones:

See more

And now 2023 is all about the Eppi®, as we celebrate its 60th birthday! The Eppi® is the most well-known product associated with the Eppendorf name. However, the Eppi® is more than just a tube, it is a deonym for microcentrifuge tubes in the volume of 1.5 mL. This product was the first single-use microcentrifuge tube made of polypropylene to be brought onto the market, and it has remained a staple laboratory consumable ever since. In fact, over a billion Eppi®'s have been sold worldwide. Walk into any laboratory around the world and you're bound to hear phrases like, "Pass me an Eppi please!" and "Where's my Eppi?" to name just a few!

With uncontested quality and performance, it's no surprise that laboratories around the world benefit not just from Eppendorf Tubes®, but also the range of compatible Eppendorf lab devices and consumables that lead global industry standards. Here, we take a look into the history of Eppendorf Tubes® that begun with the Eppi® 60 years ago, and how the outstanding quality of these innovations have changed scientific experiments for the better.



60 YEARS EPPI®

www.eppendorf.link/60YearsTubes

Key Milestones Over 60 Years of Eppendorf Tubes®

1960's – 1980's: The rise of the Eppendorf Tubes®

This period saw the invention of the 1.5 mL Eppi® and the microliter system, which quickly led to Eppendorf Tubes® becoming the industry standard and gaining popularity in medical and bioscience labs worldwide.

1963 – The first Eppi®

The invention of the first piston-stroke pipette by Eppendorf in 1961 presented scientists with the ability to safely and accurately dispense liquids in the microliter range. But, of course, these scientists required a suitable vessel to mix, store and centrifuge samples at this small working volume. And so, the Eppi® (as we call it today) was born!

The launch of the first Eppi® allowed scientists to easily handle small volumes manually, opening up the possibility of reducing the volume of expensive reagents and precious samples needed for experiments.

The Tube 3810, as it was officially called before it gained it's affectionate Eppi® name, was the first single-use 1.5 mL tube for the processing of microlitre volumes. The Eppi® provides solutions for sample mixing, storage and centrifugation and has helped fuel amazing discoveries across bioscience. For example, within a decade of the first Eppi® being manufactured, there were major advances in molecular biology, with the development of gene cloning and PCR. And in medicine, the discovery of life saving medicines and vaccines included the first hepatitis B and meningitis vaccines.

1964 – The Eppendorf microliter system

As the popularity of the Eppi® grew, scientists found a further need for a range of lab bench devices and consumables that were compatible with this new size of tube.
In response, Eppendorf developed the microliter system to offer full sample processing solutions for microliter volumes, and which consisted of a mixer and centrifuge as well as Eppendorf Tubes®. To this day, these products remain at the core of laboratory work and the Eppendorf product portfolio. And since 1964, the microliter system has expanded further, with the current range of pipettes, centrifuges and mixers being complimented by Eppendorf Tubes® and pipette tips to process sample volumes ranging from 0.2 mL to 50 mL.

1980's – 2000's: Broadening the horizons of the Eppendorf Tubes®

By the 1980's, the Eppendorf microliter system meant that scientists could handle microliter volumes with ease. However, the innovations didn't stop here. Eppendorf set out to take its offerings a step further, developing new and improved Eppendorf Tubes® that could solve some of the key issues holding scientists back. With the development of new technologies and design features came improvements in safety, maximized sample recovery, and better prevention of contamination and sample degradation.

1988 – Eppendorf Safe-Lock Tubes

Eppendorf Tubes® with a safe-lock lid were designed to prevent unintentional lid opening and subsequent sample loss during centrifugation, incubation and storage.

These provide scientists with extra safety and assurance when handling hazardous substances, and also prevent evaporation loss during long term sample storage.

1992 – Eppendorf Biopur®

Shortly after Eppendorf Safe-Lock Tubes, a new quality standard for all Eppendorf Tubes® was established. This was the Biopur® standard, allowing Eppendorf Tubes® to have the highest grade of purity attainable. To qualify for Biopur® certification, each batch of tubes must pass a series of eight tests.

With this certification, Eppendorf Tubes® are guaranteed to be sterile and free of pyrogens, RNases, DNases, DNA, ATP and PCR inhibitors. Biopur® remains the industry standard to this day and has revolutionized molecular and cellular experiments, where a contamination free environment is essential.

2004 – Eppendorf DNA and Protein LoBind® Tubes

The next major Eppendorf Tubes® innovation in the 2000's was Eppendorf LoBind® Tubes. Using a special type of polypropylene and an optimized manufacturing process, a hydrophilic surface is created inside of the tubes. This reduces surface-to-sample binding without the need to coat the tubes with components that could contaminate the samples. Eppendorf LoBind® Tubes enable almost complete recovery of DNA, RNA, proteins, viruses and peptides and so they are particularly useful for tricky nucleic acid or protein experiments that involve valuable samples and reagents.

2005 – Eppendorf Tubes® with outstanding centrifugation stability

In the early 2000's, Eppendorf expanded its range of microcentrifuges to offer faster and more effective centrifugation. To keep up with microcentrifuge innovations, Eppendorf Tubes® evolved to withstand centrifugation forces up of to 30,000 x g. These ensure safe and reliable sample centrifugation to help scientists save time on protocols while also ensuring maximum sample recovery.

2010's – present: Smart and sustainable Eppendorf Tubes® innovations

The past decade has seen several Eppendorf Tubes® innovations to meet the changing world of science. This includes conical tubes with larger volumes that are optimized for simple and efficient use and technological moves towards higher sustainability, helping to reduce the environmental impact of single-use plastic lab consumables.

2013 – Eppendorf Tubes® 5.0 mL

In July 2013, Eppendorf Tubes® 5.0 mL were released to close the large gap in tube sizes between 1.5 mL microcentrifuge tubes and Eppendorf 15 mL Conical Tubes. The revolutionary 5 mL tubes process larger sample volumes than the Eppi®, and come complete with a system of Eppendorf adapters, rotors, racks and accessories. To suit any sample needs, the Eppendorf Tubes® 5.0 mL are available with either screw lids or snap caps that allow for easy one-handed opening and closing.

2019 – Eppendorf Conical Tubes 25 mL with SnapTec® technology

The Eppendorf Conical Tubes 25 mL bridge the gap between 15 mL and 50 mL tubes. These have an optimized design, having the same diameter to the Eppendorf Conical Tubes 50 mL but with a lower height. This improves sample handling, reducing the risk of contamination from pipette tip insertion and allowing for the 25 mL tubes to be used with the same adapters and racks as the 50 mL tubes.

Additionally, the Eppendorf Conical Tubes 25 mL innovation is paired with the development of SnapTec® technology, which are patented snap caps that have been specially developed for Eppendorf Conical Tubes. These new and improved caps allow for single-handed opening to improve the ease of experiments.

2022 – Eppendorf Tubes® Biobased

The most recent Eppendorf Tubes® innovation - Eppendorf Tubes® Biobased - are helping to improve the sustainability of single-use plastics. Using an innovative manufacturing process, Eppendorf Tubes® Biobased are made of 90% recycled raw materials from feedstock including food oil waste. These tubes are available in 5.0 mL, 15 mL, 25 mL and 50 mL sizes with screw caps. This new generation of tubes also meet the same strict specifications for purity and quality to the other Eppendorf Tubes®, allowing for maximized sample safety and performance, while reducing the carbon footprint of laboratories.

60 Years of Lab Innovations

Eppendorf Tubes® have stood the test of time. The modern Eppi® remains a staple lab consumable worldwide, and remarkably, the current model in labs around the world today bears strong resemblance to the first Eppi® that was manufactured 60 years ago. Since 1963, several innovations in Eppendorf Tubes® have occurred and the range has grown to accommodate sample volume capacities ranging from 0.2 mL to 50 mL. Moreover, the continuous evolution of Eppendorf Tubes® mean that they remain the industry standard, with unmatched quality and certified purity to ensure efficient and reliable sample handling.

What Could the Future Hold for Eppendorf Tubes®, Including the Well-Loved Eppi®?

Back in 1970, our founders Dr. Netheler and Dr. Hinz perfectly described the Eppendorf mission:

> *"Eppendorf should be synonymous with customer-oriented processes, innovative technologies, and premium products and services to improve human living conditions."*

In 2023 this mission statement still holds true. We are more dedicated than ever to improving human everyday living conditions with our products and technologies, including lab consumables. Sustainability is a key aspect of this. We are striving to reduce the carbon footprint of our materials, to help lessen the impact of climate change on our future generations.

Our latest Eppendorf Tubes® innovation - Eppendorf Tubes® Biobased - use less fossil-based feedstock in their manufacturing, helping us to reduce our carbon footprint. These innovatory tubes are made from 90% renewable material, improving the sustainability of everyday lab consumables without compromising on product quality or performance.

Find out more about the Eppendorf mission to improve sustainability:

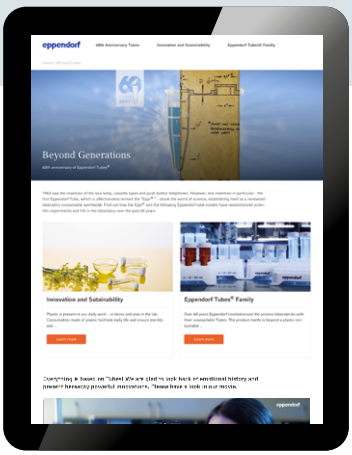
See more

We are also continuing to improve everyday living conditions with lab digitalization. We recognize the transformative effect that digitalization is having around the world, in all aspects of life. And the lab is no exception to this, with digital technologies helping to streamline lab workflows, scale up experiments and improve data management. To complement our visionary digitalization technologies, the SafeCode system has recently been developed for Eppendorf Tubes® and CryoStorage Vials.

This is a multi-level barcoding system for reliable, long-term sample identification. With the SafeCode system, barcoded Eppendorf Tubes® can be integrated into our sample management software, eLabInventory to keep track of precious samples.
Furthermore information of Eppendorf digitalization solutions on www.eppendorf.com/digitalsolutions.

Join us in celebrating the 60th anniversary of the Eppendorf Tubes®

See more



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