Porous Plastics Products

Porous plastics products include biocomma® lab frits, 4Tip™ Filters, H_2OStop® medical filters, Dasang® air filtration filters and custom filters, which have been widely used in sample preparation, life science, medical consumables, air filtration and etc.

FILTRATION
2022

biocomma

Company Profile

Biocomma is a leading manufacturer of sample preparation solutions in China founded in 2006. We start business from porous plastic filters, then entered into the fields of injection molding, sample preparation, medical device, etc. Now Biocomma has more than 1,000 employees, over 80,000m^2 production base, and serves more than 4,000 customers worldwide.

CONTENTS 目录

Brands

biocomma®
Frits and empty columns for laboratory solid-liquid separation.

4Tip™
Sintered PE filters for pipette tips.

Dasang®
Sintered PE frits for reducing dynamic noise.

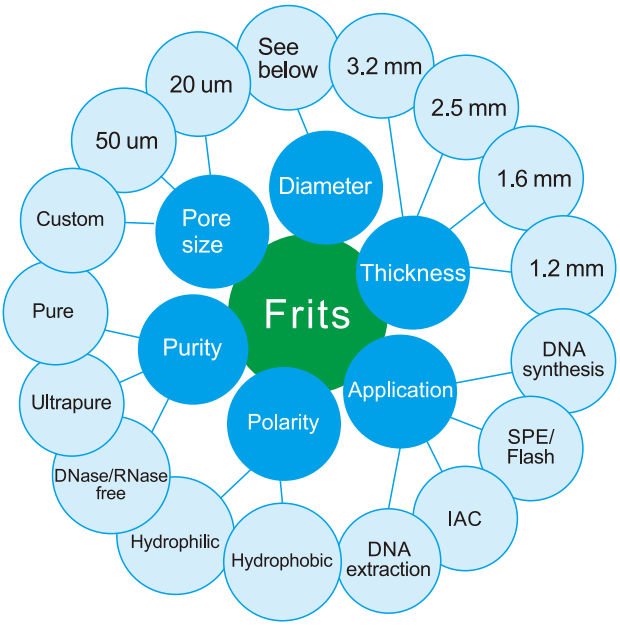
Embed™
Oligo synthesis products powered by our CPG-PE sintered technology.

H_2OStop®
Self-sealing filters for medical usage.

biocomma® UHMW-PE Frits

PE is one of the most commonly used polymers in the world, sintered UHMW-PE frits could meet general applications requirements in life science, chemistry analysis, drug discovery, sample preparation and gas detection, etc.

Take into account sorbent, solvent and other factors depending on the application when selecting the frits. Here are some professional advices from Biocomma.



Typical lab frits and applications

Hydrophobic/Hydrophilic Frits

Hydrophobic frits are commonly used in applications involved organic solvents or gas.
Hydrophilic frits are usually used in applications involved aqueous solutions.

Frits for Solid Phase Extraction (SPE) Cartridges

Optimized in purity, flowrate control, stability and chemical resistance, frits for SPE cartridges have proven to fit and function in various SPE cartridges or multi well plates.

Frits for Affinity Chromatography (AC) Columns

Optimized in purity, flowrate control, stability and chemical resistance, frits for SPE cartridges have proven to fit and function in various SPE cartridges or multi well plates.

Frits for Nucleic Acid Purification Spin Columns

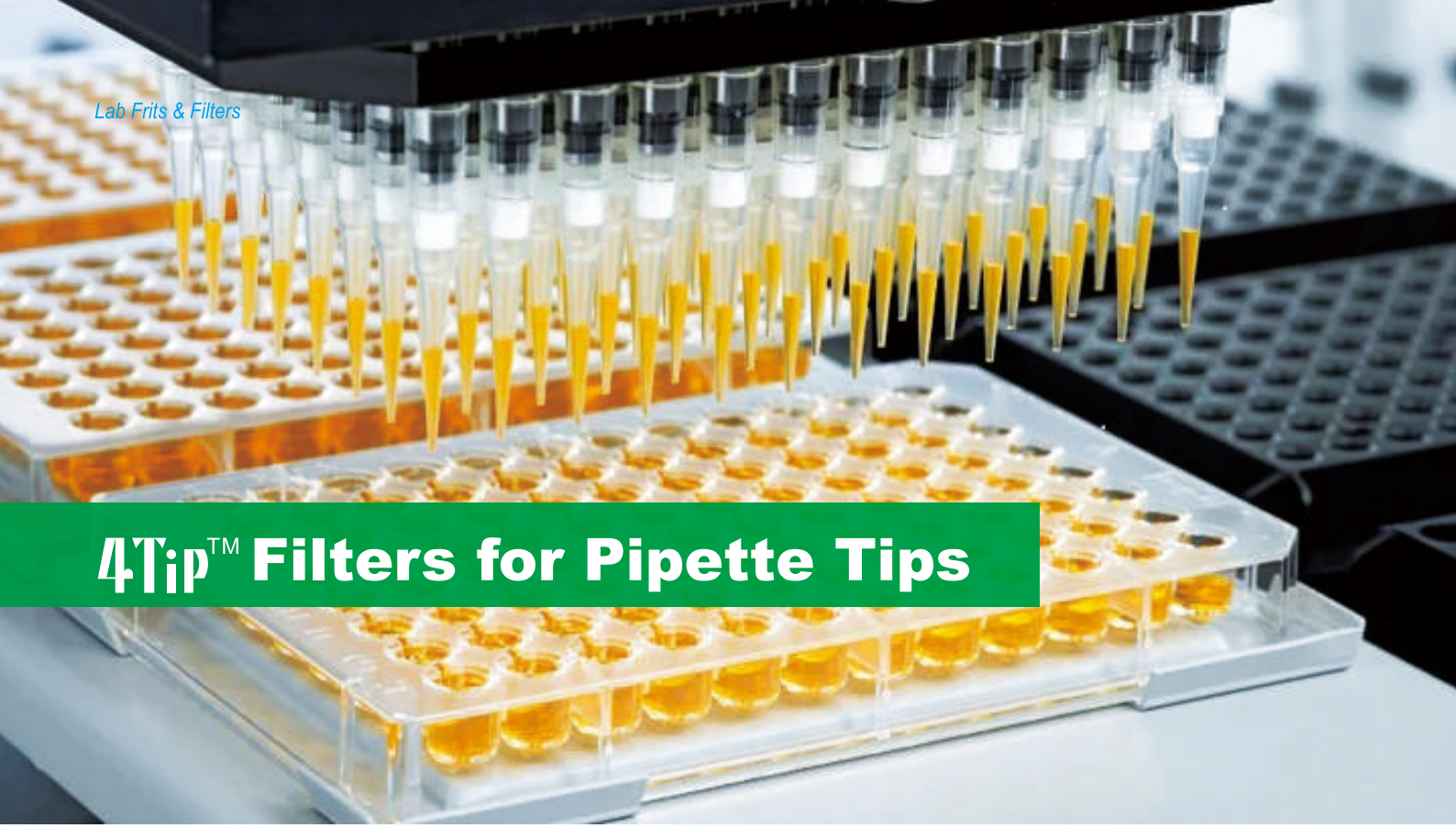
DNase/RNase/PCR inhibitor free, available in various sizes to meet the application needs of nucleic acid extraction or purification.

Frits for Oligo Synthesis Columns

Optimize the pore size to ensure that CPG particles and synthesis reagents are mixed thoroughly.

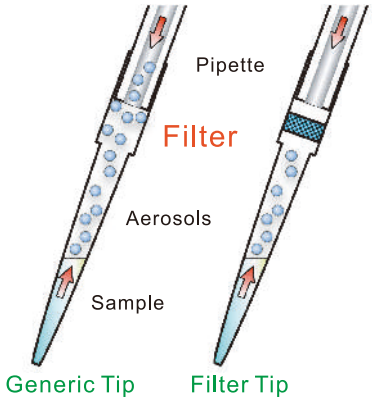
Frits for SPPS Reactors

Optimized in purity, pore size, stability and chemical resistance, frits for SPPS reactors have proven to fit and function in various SPPS reactors.

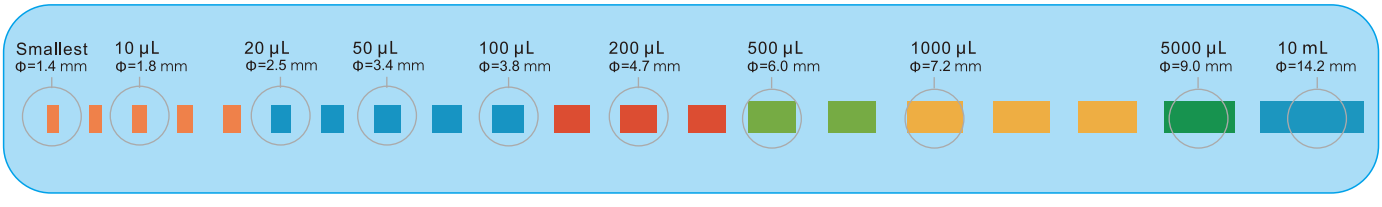


4Tip™ Filters for Pipette Tips

4Tip™ filters for pipette tips are made from pure ultra-high molecular weight polyethylene (UHMW-PE) and processed via Biocomma's proprietary technologies. With superb hydrophobicity, 4Tip filters for pipette tips offer ideal barrier against aerosols in liquid handling to protect samples from potential cross-contamination and improve the results reliability of analysis.



Using the tip without filter, aerosols generated during sample aspiration can easily contaminate pipette and result in potential risk for the operator. Filter in tip could offer a good solution to protect against aerosols and biomolecules, which prevents cross contamination in liquid handling.



Typical lab filters and applications

4Tip™ Filters for Pipette Tips

- DNase/RNase/PCR inhibitor/pyrogen-free
- Optimized pore sizes for easier pipetting and dispensing
- Rigorous dimension tolerance control
- Unique design for demands of automated assembly
- No flashes/impurities to meet stringent requirements in appearance

4 Tip™ Dual-layered Filters for Pipette Tips

Composing of two filtration layers of different pore sizes, dual-layered filters offer enhanced aerosol barrier as well as good air permeability.

4 Tip™ Activated Carbon Filters for Pipette Tips

By immortalizing highly activated porous carbon particles on surface of UHMW-PE filters, aerosol and active molecules can be prevented from entering the pipette shaft.

Dissolution Filters

Dissolution filters have been widely used in pharmaceutical tablet dissolution test, also in instruments such as DNA synthesizer, HPLC system and medical dialyzer to filter contaminants.

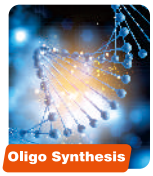
biocomma®dissolution filters are sintered from pure UHMW-PE with larger surface area and optimized flow rate. Dissolution filters provide superior resiliency for a good compression fit and a strong, durable construction. Additionally, our dissolution filters are chemically-resistant to withstand most acids and bases.

Features:

- Available in standard cannulas, disks or flexible custom configurations
- No flashes/rag, to meet requirements of stringent appearance
- Reliable filtration performance

Applications:

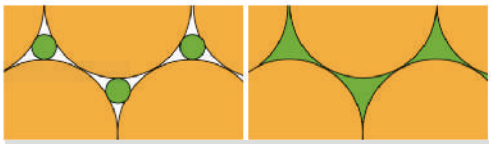
- Dissolution test
- Filtration of HPLC mobile phases



H_2OStop® Self-sealing Filters

Self-sealing filters are made by embedding a water-swellable polymer into porous structure of sintered PE filters. Under dry conditions, the water-swellable polymer shrinks, and air pathways within porous PE structure are open, keeping a good air permeability. Once contacted with aqueous solution, the water-swellable polymer swells very quickly and fills the porous PE structure, leading to clogged air pathways and preventing solution from flowing through the filter.

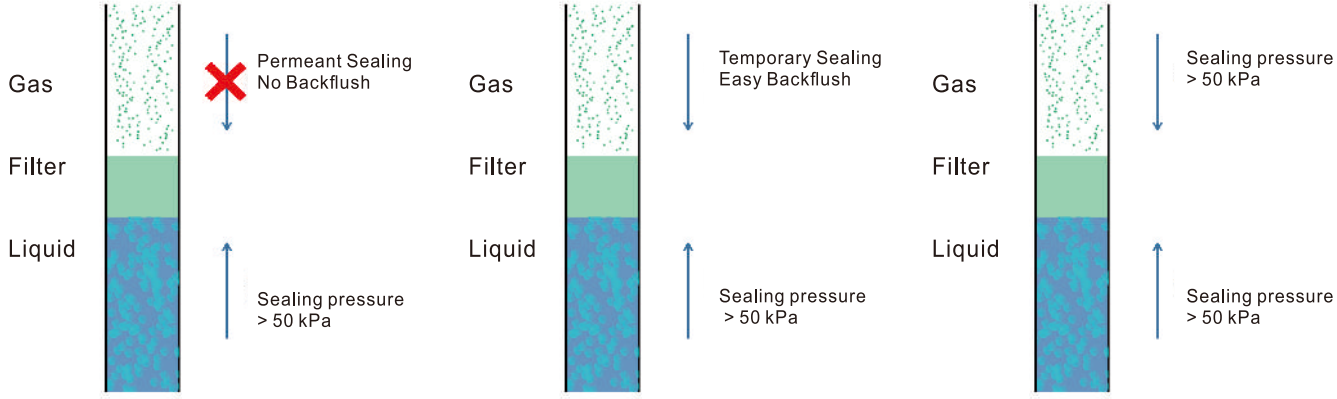
Due to their superb air-permeability / water-blocking feature, H2OStop self-sealing filters have been widely used in biological and medical fields



Under dry conditions, air pathways are open.

After contacting water, air pathways are closed.

H_2OStop® self-sealing filters show excellent sealing performance, staying functional under pressure of 5-10 m water. Meanwhile, to meet requirements of your particular applications, we offer three sealing options.



Classical Sealing Technology

One-Way Sealing Technology

Two-Way Sealing Technology

Typical medical filters and applications

Self-sealing Filters for Suction Canisters/Liners

Air is freely exhausted through self-sealing filters, allowing waste liquid being collected in suction canisters. Once contacted with waste liquid, self-sealing filters will be sealed immediately (self-sealing effect) and prevent waste liquid from spilling, protecting medical equipment and surroundings from being contaminated.

Self-sealing Filters for ESR Pipettes

Self-sealing filters allow for convenient ESR testing, helping operators quickly and accurately pipette blood to “0” mark.

Self-Sealing Filters for Arterial Blood Samplers

Self-sealing filters working with arterial blood samplers can simplify blood sampling procedure, prevent air from contacting blood sample and avoid gas exchange between air and blood.

Self-sealing Filters for IV Catheters

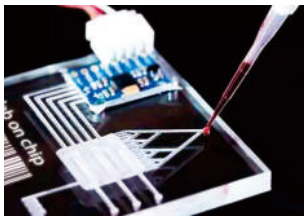
Self-sealing filters work with IV catheters to protect patients’ veins, alleviate their pain of repeating veinpuncture and improve the efficiency of medical staffs.

Self-sealing Filters for Peripheral Venous Catheters

Self-sealing filters work with peripheral venous catheters to simplify excluding air bubbles, ensuring one-time successful rate of near 100%, and effectively prevent medication from spilling.

Self-sealing Filters for Microfluidic Chips

Self-sealing filters in combination with microfluidic chips make it possible to achieve sophisticated flow control in lab-on-a-chip.

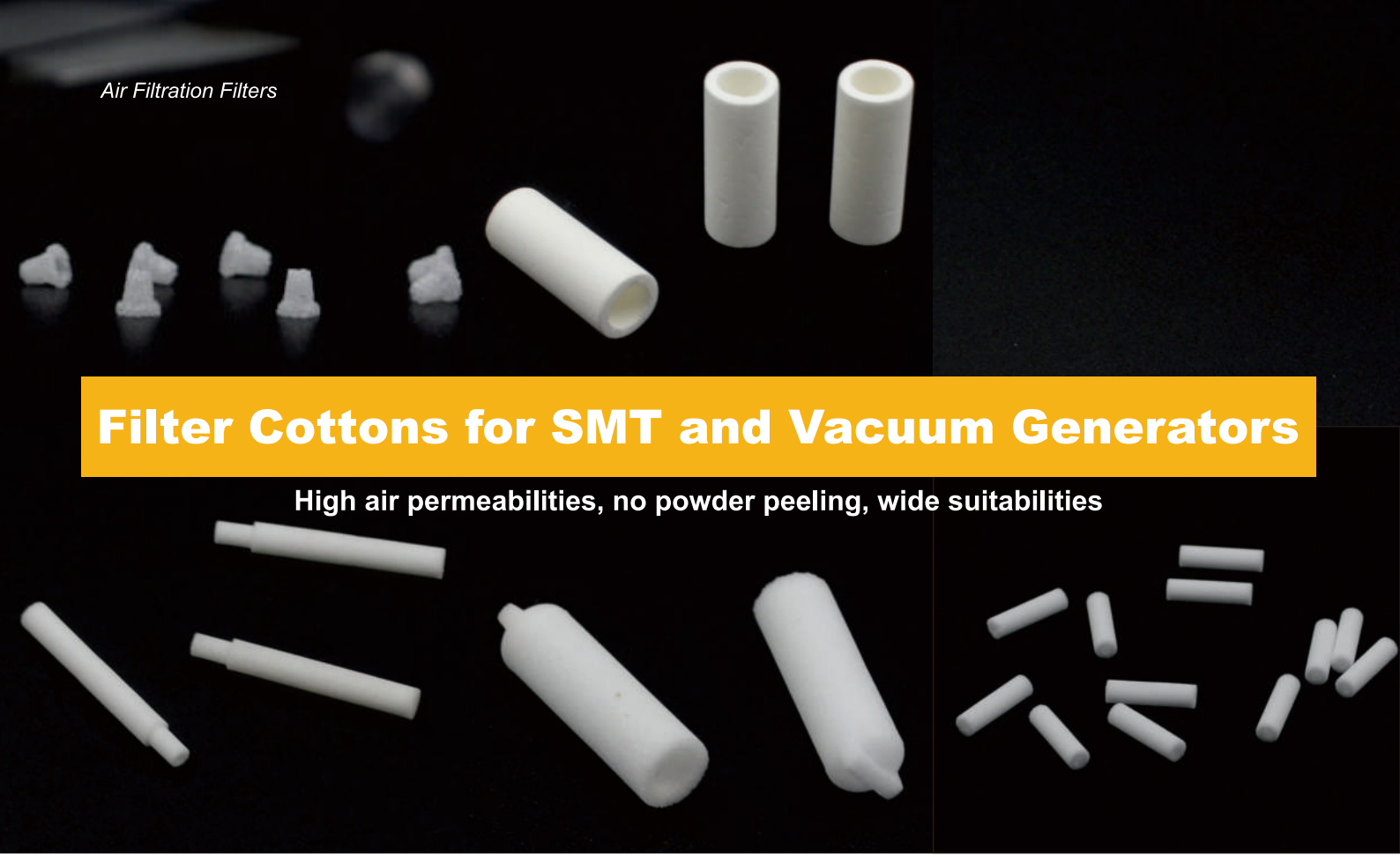


Filters for Medical Oxygen Generators

Filters can maximize contact area of generated oxygen and humdifying fluids at any flowrates, allowing for uniform, sterile and filtrating humidifying. They also bring in noise suppression and high safety.

Filters for Humidifiers

Filters for humidifiers are sintered from high purity UHMW-PE material, with a uniform filtration level. The enormous pores provides extremely large contact area between flowing oxygen and humidifying liquids, producing uniform, sterile oxygen output for patients.



Filter Cottons for SMT and Vacuum Generators

High air permeabilities, no powder peeling, wide suitabilities

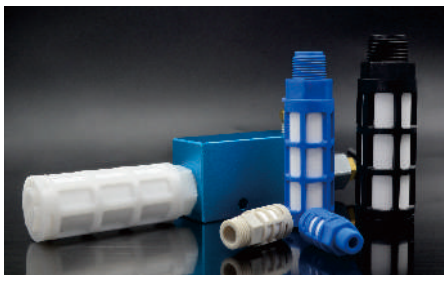
Biocomma® has been focusing on sintering technology of porous plastics and has abundant experience in filtration field. Replacement filter cottons comparable with original products have been developed for a wide range of SMT assembly systems and vacuum generators.

biocomma® Filter Cottons' Advantages:

- Ideal choice for air filtration due to high porosities (up to 85%), resulting from our state-of-the-art technology of sintering UHWM-PE and PVFM products;
- Filter cottons for SMT assembly systems are suitable for equipment from PANASERT, FUJI, SIEMENS, YAMAHA, SAMSUNG, UNIVERSAL, HITACHI, SONY, SANYO, PHILIPS, SUZUKI, etc.;
- Filter cottons for vacuum generators are suitable for equipment from SMC and PISCO;
- Each filter cotton can be made from five different materials to meet customer's needs for various performance and cost requirements.
- Sufficient inventory for commonly-used filter cottons promises quick delivery.

Dasang® Plastic Mufflers

Innovate in porous plastics, for a quieter workplace

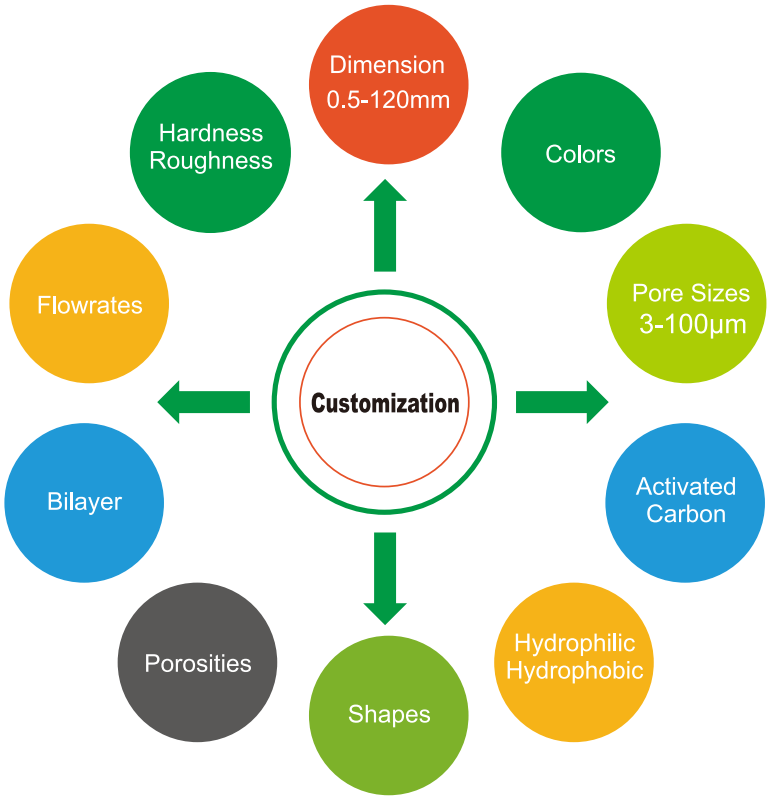


In modern process of industrial production and equipment usage, mufflers can effectively reduce noise from pneumatic devices and provide the best trade-off between noise-reducing and acceptable back pressure in pneumatic systems. Generally speaking, mufflers come with a wide variety of sizes in order to adapt most standard valves, and their rigid integrated screws enable easy installation on pneumatic devices.

In terms of materials, porous plastic mufflers have many advantages over metal mufflers, including: significant reduction in weights, remarkably improved corrosion resistance, higher capability of filtering particles and aerogels, higher durability, quicker installation and lower costs.

Custom Frits / Filters

Biocomma's filters are highly customizable and can be fine-tuned to offer the best performance and affordable costs according to your applications.



Typical custom filters and applications

Filters for Wine and Beverage Filtration

Filtration grades and flowrates can be fine-tuned according to customer's needs. Custom filters for wine and beverage filtration have long working lives, high efficiencies, tight fittings to filtration equipment and easy usage, no plasticizers and complying with JHPIA and US FDA criteria.

Filters for Headphones

These filters bring in enhanced waterproof and air permeable performance for headphones, resulting in homogeneous acoustical diffusion and euphonious tone.

Filters for Aquariums / Water Purifiers

These filters can efficiently remove granules and harmful chemicals in water, featuring high precision filtration and odor removal as well as superb adsorption and no color fading.
Activated carbon can be optionally added for better filtration performance.

Filters for High-Precision Devices

Biocomma is able to produce the tiniest filter in the world, with 0.5 mm in diameter at a precision of 0.01 mm.
These filters can be used in wearable devices, gastrointestinal probes, industrial robotics and other high-precision devices.

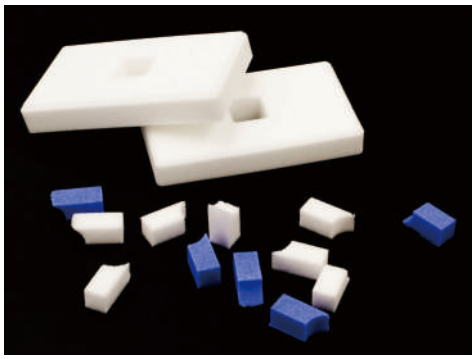
Filters for MPV Suspension Seats

These filters have been used in General Motors' high-end MPV suspension seats. In addition to traditional noise suppression strategies in high frequencies, these filters can implement noise control in low frequencies, enabling noise-reducing in multiple frequency segments, thus allowing for comfort riding.

Filters for Fragrance Bottles / Essential Oil Bottles

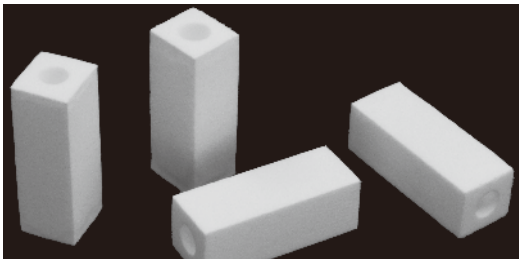
By fine-tuning their pore sizes, these filters not only enable uniform evaporation of fragrances / essential oils, but also remove impurities to improve fragrance quality.

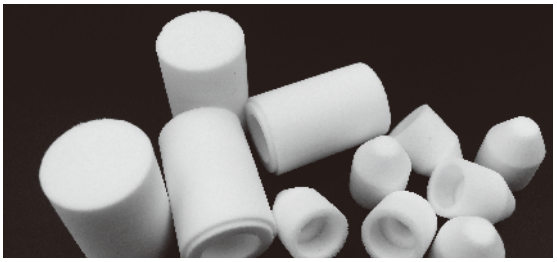
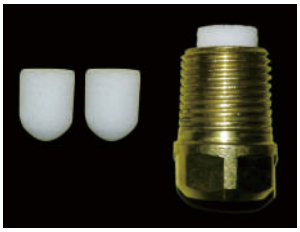
Filter Gallery (I)

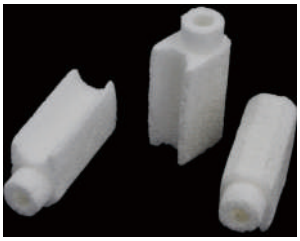


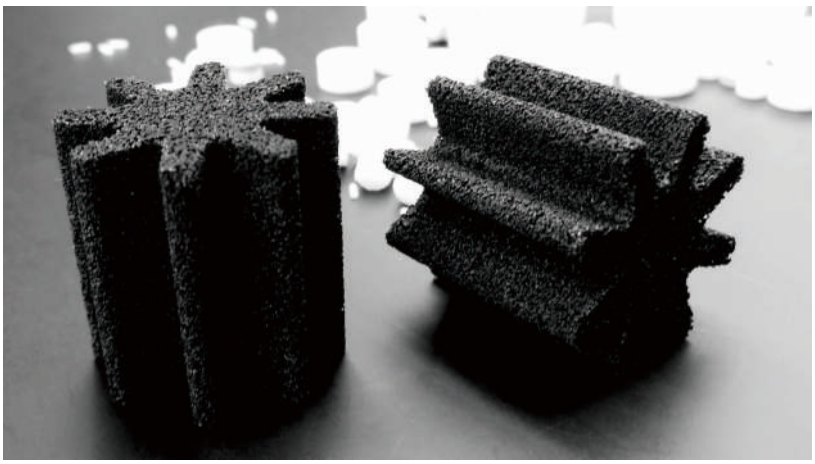
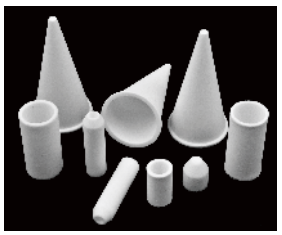
Filter Gallery (II)

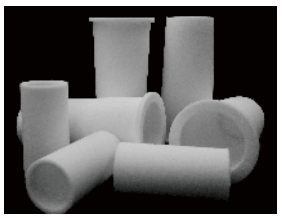
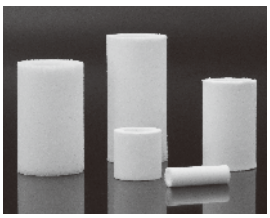


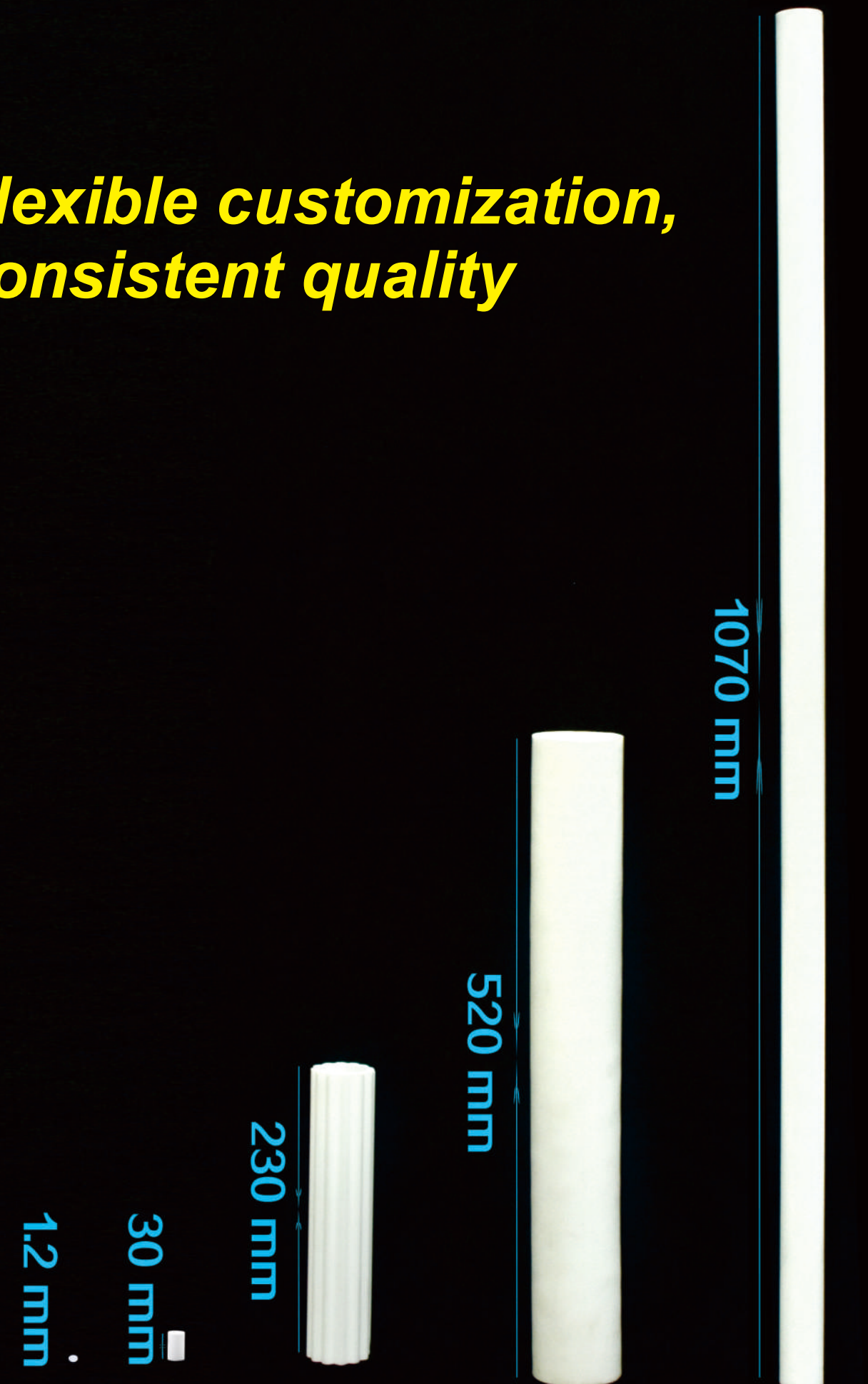






Flexible customization, consistent quality



Better Filter & Better Sample Prep

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