The technology for today's face masks generally comes from the medical industry. A facemask is a medical device.

When consumers use a mask to attempt to protect themselves and their peers from CV-19, they are deploying the technology developed for deep-sea divers (and their patients with lung ailments) and over the operating room, and are even used in tangential areas like the waiting room.

N95, N99, N100

Many of the best face masks respirators are currently reserved for healthcare workers

Incidentally, the much referenced N95 was a model developed in the 1970's by 3M for industrial use, and subsequently, adopted by the medical profession. In case anyone is wondering, the numerical "95" represents that the mask is capable of filtering 95% of airborne particulates, including viruses, while the "N" stands for "Not resistant to oil, that not require the standard of being resistant to oil particulates. The N99 and N100 actually provide higher levels of particulate filtration, but with a trade-off on the wearer's ability to breathe freely.

However, there are some good masks available for consumer use also which use some of the exact same materials and are very effective

Equally, there are many shoddily made products produced in poor grade factories using inferior materials, or made at home that do little to nothing to protect the wearer.

The chart below outlines the effectiveness of various types of masks, including the 2 varieties that Blue Bear makes available to the public.

Understanding the Difference

	Surgical Mask	N95 Respirator
Testing and Approval	Cleared by the U.S. Food and Drug Administration (FDA)	Evaluated, tested, and approved by NIOSH to stringent requirements in 42 CFR Part 84
Intended Use and Purpose	Fluid resistant and provides the wearer with a barrier against large droplets, splashes, or sprays of bodily or other hazardous fluids. Protects the wearer from the wearer's respiratory emissions.	Reduces wearer's exposure to airborne particles (including aerosols and small droplets) during work with aerosols.
Face Seal Fit	Loose-fitting	Tight-fitting
Fit Testing Requirement	No	Yes
User Seal Check Requirement	No	Yes. Required each time the respirator is put on (donned)
Filtration	Does NOT provide the wearer with a respiratory protection against airborne infectious particles and is not considered respiratory protection	Filters out at least 95% of airborne particles including large and small particles
Leakage	Leakage occurs around the edge of the mask when user inhales	When properly fitted and donned, minimal leakage occurs around edges of the respirator when inhaling
Use Limitations	Disposable. Discard after each patient encounter.	Ideally should be discarded after each patient encounter. However, if respirator is not damaged, soiled, or difficult to breathe through, it may be exchanged or sterilized, no longer than 6 months after first use, and reused only on a single individual. Discard when damaged, soiled, or contaminated with blood, respiratory secretions, or other other bodily fluids from patients.

Source: CDC Texas
Centers for Disease Control and Prevention
Division of Healthcare Quality Promotion

China is the source of most masks today because they have had years to set up the infrastructure to build quality masks at scale

And culturally, the face mask is a common site throughout China, especially in airports and other travel hubs. However, there is a wide range of quality depending on which supplier is sourced.

The disposable surgical masks look nearly identical on the outside, so most buyers and consumers often think they are all the same. This is far from true.

A key component of effective disposable masks is the middle layer of a 3-ply product, which should be constructed of melt blown fabric, acting as a filter for particles.

The melt blow fabric forms the inner filtration layer that filters out hazardous particles ... and protecting both the wearer and those in close proximity to the wearer. Melt blown fabric was developed in the 1950s and has decades of data that support its efficacy in screening out pathogens, yet allowing oxygen in to make the experience comfortable. Though invented in the US, China currently produces 40% of the world's melt blown fabric.

If you aren't a scientist, a quick way to eliminate cheap masks is simply to hold them and compare the weight to quality. 3-ply masks — cheap masks are demonstrably lighter. Often similar in visual appearance, a higher quality mask requires more polymer to create the melt blown fabric, hence it will be heavier as a finished product. The difference in how they feel might wow a noticeable. Less material equals inferior quality and protection.

Factories tend to specialize in one type of mask. Of the nearly 150 factories that produce masks in China, less than 20% have met US quality standards. Our factory has, But, being on the entire list, though important, doesn't necessarily guarantee specific performance specifications. To do that, you need verification from a third-party laboratory. Our test results showed that our Disposable Face Masks were over 98.98% of all particles matter above 0.1 microns, enabling us to provide a superior product to the general public at a reasonable price.

An issue scarcely discussed is the need for children's masks. The CDC says that all children over the age of 2 should be wearing face masks. However, the ones made for adults don't fit small faces, and when a mask doesn't fit, it doesn't protect. If a mask does not fit over a person's nose and mouth firmly, there is a significant drop-off in protection effectiveness. We are producing Mini masks that fit kids. They use the same technology as our full-size masks, just in smaller sizes. As our sets say, keep all your bears safe.

SUPPLY CHAIN

It doesn't help much to have a good product at a good price if you can't get the product to market in a reliable, timely basis.

Our team has been on the ground in China for nearly 15 years. We know how the market operates, we know the players in both the private and public sectors, who have the final say on all matters in China

CREATING A TRUSTED BRAND

There are now suppliers of face masks it seems coming out of the woodwork. P&G famously said once that their brand names were more valuable than all the factories, inventory, cash, and other tangible assets all put together.

We couldn't agree more. That's why our aim is to build the most respected brand in PPE.

Don't settle for a lightweight filter

Blue Bear masks exceed these screen out over 99% of all particulate matter

Results:

Sample Number	Average Total Active Counts	Average Control Counts	Filtration Efficiency (%)
1	76	10,268	99.32
2	61	10,268	99.41
3	85	10,329	99.18
4	99	10,890	99.02
5	75	10,873	99.01

Study Number: 11-0248-001
Latex Particle Challenge Final Report

Nelson Labs test results (above) among 5 randomly selected Blue Bear masks showed a range of 99.33 - 99.61% of all particulate matter is screened out, for an average of 99.56%, which is extremely high, and comparable or better than the medical grade N95 mask.

NEW BUSINESS INQUIRES

for more information or a price quote on all our PPE products, contact me : mike@bluebearprotection.com

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