Basic principles of safety – Air classification particulates

Your Objectives:

At the end of this lesson “Basic principles of safety – Air classification particulates” you should be able to explain the IMPLICATIONS if an area is contaminated.

Because different [ ] interact differently, cross contamination will negatively impact the product's efficacy, and can, for instance, cause further [ ] problems or trigger an [ ] reaction in the patient.

Even [ ] via particle buildup from a single substance can cause complications, such as altering the intended dosage of the [ ].

Types Of Contaminants

We need to consider contamination to be anything that might render the product impure or unfit for use:

- [ ] contaminants include such things as [ ], yeasts, fungi, molds, and viruses. Cleaning, disinfecting, and steam sterilization help control microbial contaminants.
- [ ] are found in the cell walls of some bacteria and can cause [ ], even if the bacteria are dead. Steam and heat can destroy some endotoxins, but in many cases, endotoxins must be removed by filtration and distillation.

- _____ contaminants may occur not only from residue of _____ left in containers or on surfaces, but also from spillage or improperly sterilized solutions.
- _____ matter includes human _____ cells, dust particles, bits of packaging material, or _____.
- _____ are tiny droplets of liquid that are created when liquid is agitated. _____ cause contamination because they float on air _____ and can easily drop into open containers or surfaces. Sources of _____ include _____, expelling liquids forcefully and(/or) splashing spilled _____.

What is Biosafety?

Biosafety is the application of safety precautions that reduces a worker's _____ of exposure to a potentially infectious microbe and thereby limits contamination of the _____ environment and therefore, ultimately, the community.

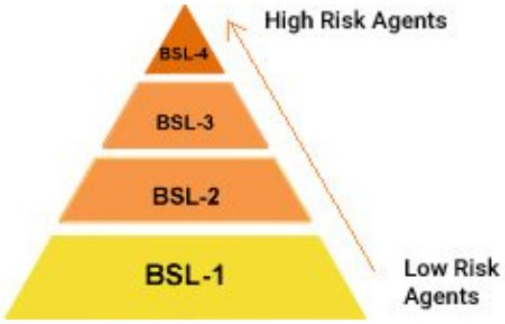
What are Biosafety Levels (BSLs)?

There are [ ] biosafety levels. Each level has specific controls for containment of [ ] and [ ] agents. The primary risks that determine levels of containment are [ ], severity of disease, transmissibility, and the nature of the work conducted. Origin of the microbe, or the agent in question, and the route of exposure are also [ ].

Each [ ] level has its own specific containment [ ] that are required for the following:

- [ ] practices
- [ ] equipment
- [ ] construction

The biosafety [ ] range from BSL-1 to BSL-4.



Each [ ] level builds upon the controls of the level before it.

Every microbiology [ ], regardless of biosafety level, follows standard [ ] practices.

Class	Maximum Number of Particles per Cubic Meter						FED-STD-209E Equivalent
	≥0.1 µm	≥0.2 µm	≥0.3 µm	≥0.5 µm	≥1 µm	≥5 µm	
ISO 1	10	2					
ISO 2	100	24	10	4			
ISO 3	1000	237	102	35	8		Class 1
ISO 4	10,000	2370	1020	352	83		Class 10
ISO 5	100,000	23,700	10,200	3520	832	29	Class 100
ISO 6	1,000,000	237,700	102,000	35,200	8320	293	Class 1000
ISO 7				352,000	83,200	2930	Class 10,000
ISO 8				3,520,000	832,000	29,300	Class 100,000
ISO 9				35,200,000	8,320,000	293,000	Room air

Aufgabe Lückentext:

Folgende Wörter bitte in den Lückentext einfüllen.
Jedes Wort kommt einmal vor.
Bitte Gross- und Kleinbuchstaben beachten.

Aerosols, Aerosols, aerosols, allergic, biosafety, biosafety, bacteria, biological, controls, contamination, currents, Chemical, chemicals, drugs, Endotoxins, Facility, fever, four, hair, health, infectivity, important, Laboratory, laboratory, levels, liquids, Microbial, microbiological, microbes, product, Particulate, risk, skin, sneezing, Safety, work