

Plants that Filter and/or Remove Indoor Air Pollution

Bring the Outdoors in and Improve Air Quality

The EPA rates indoor air pollution as one of the top five threats to public health. Fortunately, NASA, in studies designed to find ways of improving indoor air quality in closed environments such as space capsules and space stations, found a solution.

NASA learned that indoor plants were effective in removing the volatile organic compounds (VOC's) emitted, or off gassed, from the synthetic materials used in the construction of the space capsules.

Due to a change in the composition of products commonly brought into our homes these same synthetic materials and fabricated wood products are major contributors to indoor air pollution in our homes. In addition, in the name of energy efficiency, our homes and offices have become more and more sealed environments. The result? Polluted air trapped in our homes. We now have the same indoor air pollution issues in our homes and offices that NASA faces with space capsules and space stations.

Dr. Bill Wolverton, NASA research scientist and author of the book *How to Grow Fresh Air — 50 Houseplants that Purify Your Home or Office*, suggests the inclusion of 2-3 plants in 8–10-inch containers, for each 100 square feet of living space to improve indoor air pollution problems. The longer and leafier the plant, the better. "The amount of leaf surface influences the rate of air purification", says Bill Wolverton. Later research has shown that soil microorganisms in potted plants also play a part in cleaning indoor air.

Air Filtering Plants

Through photosynthesis, plants convert carbon dioxide that we exhale into fresh oxygen as well as improve indoor air quality by removing chemical toxins that contribute to indoor air pollution. They have also been shown to reduce stress, raise humidity and filter dust from the air. What they ask for in return is water and occasional fertilizing.

Here are some recommendations of plants that are effective in absorbing VOC's:

Anthurium: Removes formaldehyde and xylene.

Areca Palm - Dypsis: Excellent air purifier. It removes acetone, formaldehyde and xylene from the air.

Bamboo Palm - Chamaedorea: Adds moisture to dry air while removing benzene, trichloroethylene and formaldehyde.

Boston Fern - Nephrolepis: Absorbs formaldehyde, xylene and toluene.

Chinese Evergreen - Aglaonema: Removes benzene and formaldehyde.

Dragon Tree - Draceana marginata: Removes benzene, formaldehyde, xylene and trichloroethylene.

Dwarf Date Palm - Phoenix roebelinii: Removes formaldehyde and xylene from surrounding indoor air.

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Air Filtering Plants Continued

Dracaena: Removes benzene, formaldehyde, xylene and toluene.

Ivy - *Hedera helix*: Removes benzene, formaldehyde, xylene and trichloroethylene.

Lady Palm - *Rhapis excelsia*: Absorbs volatile organic compounds.

Rubber Plant - *Ficus elastica*: Excels at removing formaldehyde, but be warned rubber plant leaves may be toxic if swallowed.

Snake Plant - *Sansevieria*: Removes benzene, formaldehyde, xylene and trichloroethylene.

Spider Plant - *Chlorophytum comosum*: Removes formaldehyde, xylene and toluene.

Peace Lily - *Spathiphyllum*: Thrives in low light and breaks down benzene and trichloroethylene.

Philodendron - several varieties: A climber that removes formaldehyde, toluene, trichloroethylene and xylene from the surrounding atmosphere.

Pothos - *Scindapsus*: Removes benzene and formaldehyde from the air.

Weeping Fig - *Ficus benamina* & *Ficus Alii*: Effective at filtering formaldehyde.