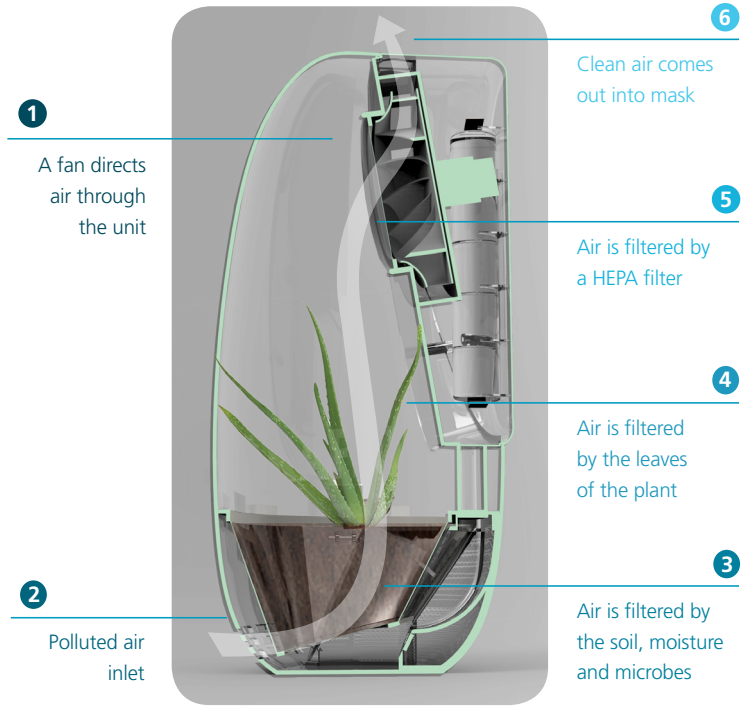
iGREEN PLANT BAG

personal portable
clean air
everywhere

The iGreen plant bag uses natural filtration power to actively filter the air indoors and outside. An essential living filter that provides you with clean air everywhere. It filters particular matter (smog, dust) as well as chemical pollutants (VOC's) from vehicle exhaust, industry and interior sources.

How it works

A low-voltage electric fan directs polluted air through moist soil with plant purifying microbes, a plant selected especially for its air cleaning properties and an additional mechanical HEPA filter. There are 3 natural processes at work: microbes on plant's roots, the plants themselves and soil and water filtration. The natural filtration power is supercharged through ventilation (see results). Together with a dedicated mask the iGreen provides clean air when going to school and at home or in the classroom.



Protect your child

As children's' lungs are most vulnerable, the iGreen Plant Bag has first been developed for children. The iGreen filter is incorporated in a light weight backpack for comfort: daily health for children living in cities. The backpack offers room for school materials.

Clean air is a basic human right

(WHO /NaturVention)

The air purifying unit can be taken easily out of the backpack for use indoors

Asia

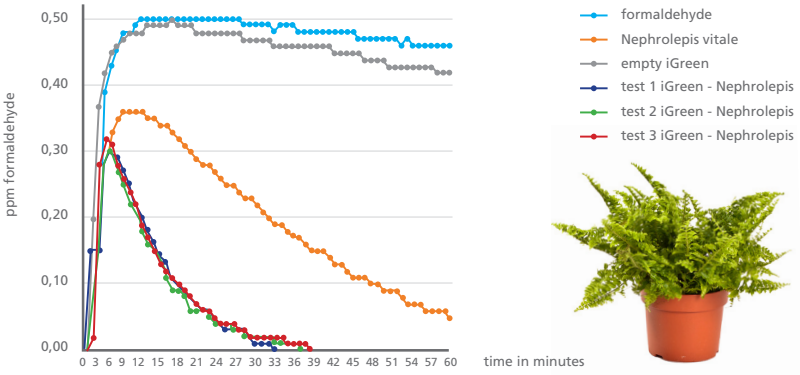
Large parts of Asia each year suffer from smog from cars, industries and forest fires. In 2014 Bejing had 60 days of extreme pollution when children had to stay at home and inside. But also in European cities air pollution can be severe. The iGreen Plant Bag is a protection measure*. It is an alternative to the masks that filter dust but do not protect against chemicals as benzene and toluene.

Standard masks let in false air and do not filter chemical pollutants

*Obviously eradicating air pollution sources is the way to go. In the meantime we seek protection of the most vulnerable.

Research and testing

The air filtering properties of soil microbes and plants was first researched in the 1980's by NASA. Now, in a series of dedicated tests the iGreen Plant bag was finetuned and validated for filtration of particulate matter and chemical pollutants by certified bodies (Fytagoras, prof. dr. B. van Duijn). Six plant species were tested. First results are presented below.



Reduction of formaldehyde by a Nephrolepis fern (without iGreen plant bag; orange line) and in the iGreen plant bag measured three times (blue, green, red lines). Out of six species Nephrolepis scored best, followed by Asplenicum and Adiantum.

Help us launch the iGreen Plant bag

A viable prototype of the iGreen Plant Bag was developed by SIGN in collaboration with B11Ndesign and students of Delft University of Technology. The prototype has been validated and components carefully selected, giving a strong case for production. We seek launching partners to co-market it.
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Foundation for Innovation in Horticulture

SIGN is an initiative of the Dutch Association of Horticultural Growers and has a strategic alliance with the Ministry of Economic Affairs.

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Fytagoras, prof. dr. B. van Duijn
Bunnik Plants

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GdP4 Kansen voor West II

Provincie Noord-Holland

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