

# MESAURING EXHAUST GASES

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# Most common exhaust gases

- Most common gases:  $N_2$ ,  $CO_2$ ,  $O_2$ ,  $H_2O$
- They are created by combustion of the engine
- There is good combustion and bad combustion
- Good combustion is to properly burn all the petrol and not have any "leftovers"
- Bad combustion is that the all gas isn't burned out and comes out from the exhaust



# IMPACT ON OUR HEALTH

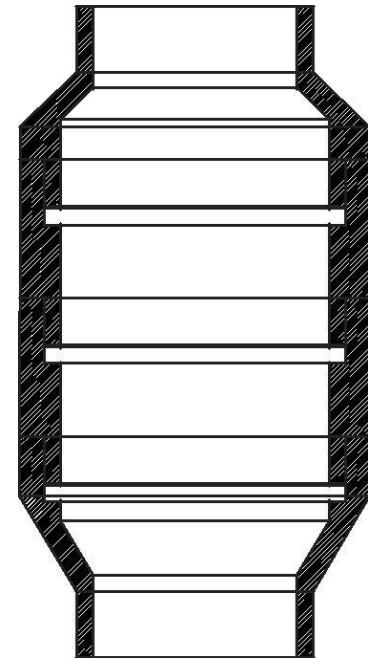
- We can breath particles smaller than 1 microne, but we see only to 20 microns
- On short term exhaust gas has impact on acute respiratory problems, reduced lung function, asthma
- On long term it has impact on cardiovascular problems, lung cancer

# MESAURING

- For mesasuring we will use cascade impactor
- It uses different sizes of filters to chatch every particle
- It can mesaure fine particles up to 0.25 microns
- We will use 3 stage cascade impactor
- Impactor will be designed by us

# MESAURING

- We will measure gas particles mostly from diesel engines
- We will measure so fine particles because engines combustions are better and there are smaller particles



# SOURCES

- <http://www.crypton.co.za/Tto%20know/Emissions/exhaust%20emissions.html> (6th of April, 2015)
- [http://en.wikipedia.org/wiki/Exhaust\\_gas](http://en.wikipedia.org/wiki/Exhaust_gas)  
(6th of April, 2015)