

Schematic drawing:

a. Putting syringe plunger out of the syringe and placing the leaves inside syringe (about 20 ml).

b. Connecting device interfaces:

Syringe with sample (② connect with ①)

Other syringe (no syringe plunger) with soda-lime and (③ connect with ①)

syringe needle (④ connect with ⑤)

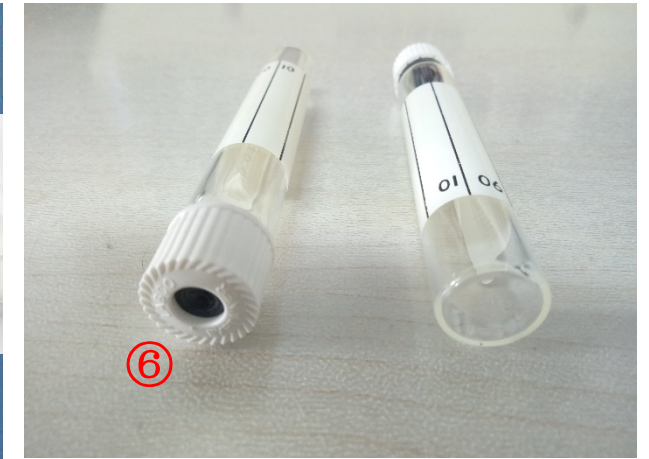
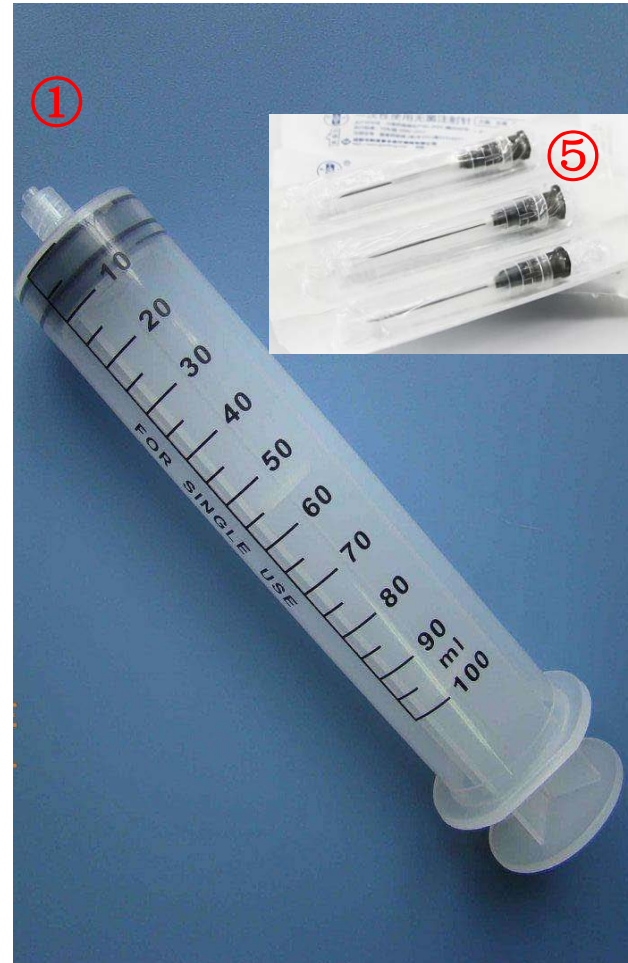
c. Flushing the syringe barrel:

② communicate with ③ and seal ⑤, ③ connect with other syringe with soda-lime, flushed with CO₂-free air 5 times by actuating the syringe plunger

d. Collecting leaf dark-respired CO₂:

② communicate with ④ and ⑤ communicate with ⑥, CO₂ in the gas sample bag. CO₂ concentration in the gas sample bag is greater than 2000 ppm.

e. Backing to LAB and measuring CO₂ by an Isotope mass spectrometer



A. Air sampling equipment



B. Putting the leaves into the syringe



C. Flushing the syringe barrel



D. Accumulating CO₂ in the syringe barrel



E. Collecting leaf dark-respired CO₂



F. Backing to LAB and measuring CO₂

