

## Haloalkanes: Wurtz reaction - lithium organyls

Article no: P3101100



### Principle

Unlike the other alkali-organyls, lithium organyls - with the exception of methyllithium - show a stronger covalent behaviour. They dissolve rather well in organic solvents, such as diethyl ether, tetrahydrofuran, and alkanes, and they are relatively stable in these solvents.

Wurtz synthesis was developed in 1854 for the preparation of higher alkanes based on haloalkanes. Alkyl iodides react the easiest. The reaction can be controlled best with lithium, since the other alkali metals react much more violently. Wurtz synthesis is often a side reaction that occurs during organometallic conversions.

### Benefits

- Didactically demonstrative laboratory gasometer
- Secure connection of the items by GL screw joint system

### Tasks

Investigate the reaction of ethyl iodide with lithium and the following reaction of ethyllithium with ethyl iodide.

### Learning objectives

- Alkali-organyls
- Lithium organyls
- Wurtz synthesis
- Organometallic compounds

### Necessary accessories

- Precision balance 620g/0.001g

## Scope of delivery

Retort stand, h = 750 mm	37694-00	1
Right angle boss-head clamp	37697-00	3
Universal clamp	37715-01	3
Two neck round bottom flask, 100 ml	MAU-27100002	1
Dimroth-Condensor, GL 25/12	MAU-27223500	1
Gasket for GL25, 8mm hole, 10 pcs	41242-03	1
Glass tube, right-angled, .	MAU-10030703	1
Lab thermometer, -10..+110 °C	38056-00	1
Gasometer 1000 ml	40461-00	1
Plastic bag w. hose 10 u.	40469-00	1
Stopcock, 3-way, t-shaped, glass	36731-00	1
Graduated cylinder, Borosilicate, 1000 ml	36629-00	1
Weather monitor, 6 lines LCD	87997-10	1
Pinchcock, width 15 mm	43631-15	2
Rubber hose	39282-00	3
Hose clip, diam. 8-16 mm, 1 pc.	40996-02	2
Tweezers, straight, blunt, 200 mm	40955-00	1
Knife, stainless	33476-00	1
Filter paper, 580x580 mm, 10 sheets	32976-03	1
Beaker, Boro, high-form	46032-00	1
Glass rod, boro 3.3, l=300mm, d=7mm	40485-05	1
Spoon, special steel	33398-00	1
Funnel, glass, top dia. 50 mm	34457-00	1
Powder funnel, PP, d=120 mm	34472-00	1
Ethyl iodide 100 ml	31008-04	1
Tetrahydrofuran 1000 ml	31883-70	1
Potassium hydroxide pellets, 500 g	30103-50	1

