



# student experiment (sem) module chemistry

Support stand material is manufactured from NTL's special aluminium profile, making it very durable and resistant to chemicals. Glassware is made of Borosilicate glass, and the test tubes feature very thick walls. Stoppers are made of silicone, a material that is food-safe, remains highly elastic for a very long time, has a high melting point and is very resistant to chemicals. The kit includes protective gloves as well as support stand fittings for attaching a protective screen.



## C9900-4A Chemistry – Stand material

Qty.	Item No.	Description
1	DS100-1H	Support base, aluminium special profile as H-shaped base, for multifunctional use in combination with sliding saddles
2	DS102-12	Stand rail base, L=125 mm, Alu
2	DS400-1K	Bosshead demo, special Aluminium material with M8 – setscrews
2	DS140-2R	Sliding saddle, horizontal type, Alu
1	DS103-04	Sliding saddle, H = 40 mm, Alu
1	DS502-02	Support ring steel, D = 102 mm, with bosshead
2	DS502-62	Support ring steel, D = 62 mm, with bosshead
1	P7240-1G	Rod 500x10 mm, nickel plated steel
1	C7002-1A	Universal clamp, 0 – 80 mm, with cork
1	C7420-1S	Spatula spoon, steel, 150x18 mm
1	C7420-2S	Spatula double, flat, steel, 180x11 mm
1	C8020-1A	Mortar, porcelain, D=100 mm
1	C8020-2A	Pestle, porcelain, L=110 mm
1	C8000-3B	Crucible, porcelain, 35 ml
1	C8010-1C	Evaporating dish, porcelain, 75 ml
1	C7415-2Z	Crucible tong, steel, L=200 mm
1	C7205-1A	Test tube holder, wooden, 10 – 30 mm
1	C7418-2A	Knife for laboratory use, stainless steel
1	C1570-1S	Pipette, measuring type, 10 ml, graduation in 0,1 ml
1	C7223-1A	Triangle from steel wire with clay tubes (60 mm each)
1	P7125-1B	Wire gauze with ceramic center, 150x150 mm
1	C7205-2A	Test tube rack, wooden, for 12 Test tubes, Hole-Dia = 22 mm, with 6 dropping sticks
1	C7418-1A	Forceps, pointed ends, stainless steel, L=115 mm
1	C6020-1C	Stirring rod, glass, 8x250 mm
1	C7600-1A	Gloves, pair of, for heat-protection
1	C7445-7G	Tube, rubber, 7/10 mm, L=1000 mm
1	C7413-1A	Deflagration spoon, L = 450 mm

### Storage:

1	C7806-4A	Box-insert Chemistry-stands
1	P7806-1B	plastic box big, with cover Plan for storage of all components

## C9900-4B Chemistry – Glass material

Qty.	Item No.	Description
1	C1000-1B	Beaker glass, 100 ml, squat form, Boro
1	C1000-1C	Beaker glass, 150 ml, squat form, Boro
1	C1000-1D	Beaker glass, 250 ml, squat form, Boro
1	C1370-1B	Funnel plastics, Dia = 75 mm
1	C1020-1D	Erlenmeyer flask, narrow neck, 250 ml
1	C1055-1H	Test tube with side arm, 30x200 mm
1	C1380-2A	Cylinder glass, plane face ground rim, 200x55 mm
1	C1064-1A	Separatory funnel, cylindrical, with stopper
1	C7520-1A	Cobalt glass plate, very dark blue, 50x50x2 mm
2	B7505-1A	Microscope glass slide, 76x25x1 mm
1	C1385-1A	Cover plate, Dia = 75 mm, one side grounded
1	C6120-1C	Watch glass, Dia = 100 mm
1	C6030-1M	Glass tubes 5/8 mm, set of 7, different shapes
12	C1050-1C	Test tube, 16x160 mm, Borosilicate glass
1	B7804-1A	Magnifier for students, plastics, 3x and 5x
2	C6150-2A	Pipette glass, with rubber bulb, 5 ml
1	C7530-1A	Test tube brush, Dia = 17 mm
1	P2220-1A	Thermometer, -10 / +110 /1,0 °C, alcohol-filled
4	C7320-1C	Stopper, blue silicone, 12,5/18/27 mm
2	C7320-1D	Stopper, blue silicone, 12,5/18/27 mm, 1 hole
1	C7320-4B	Stopper, blue silicone, 26/32/30 mm, 1 hole
1	C7320-5B	Stopper, blue silicone, 31/38/35 mm, 1 hole
1	C7540-1A	Pipette filler, rubber

### Storage:

1	C7806-4B	Box-insert Chemistry-glass,
1	P7806-1B	plastic box big, with cover Plan for storage of all components

# student experiment module (sem) chemistry



With the distillation-set C9900-4C are additional experiments on "distillation" possible. With the elektrochemistry-set C9900-4E are 13 additional experiments on "elektrochemistry" possible



## C9900-4E Electrochemistry

Qty.	Item No.	Description
1	DE921-3A	Clamp with banana plug
1	C3082-4C	U-tube with side arms, glass, NB 19/26
1	C7118-2A	Boss head on rod for electrodes
1	P3310-1A	Alligator clip
1	C7118-2B	Adapter for P3910-2B
1	P3910-2B	PIB socket for incandescent lamp E10
1	C1000-1B	Glass beaker 100 ml
1	P3320-1I	Incandescent lamp E 10 / 10 V / 0,05 A
1	P3310-3A	Connecting lead 50 cm, red
2	P3310-3B	Connecting lead 50 cm, blue
2	C7124-5A	Electrode, carbon 150 x 8 mm
1	C7124-4A	Electrode, copper 150 x 8 mm
2	C7124-6A	Electrode, nickel 130 x 4 mm
2	P7130-4B	Silicon stopper, 17/22/25 mm, 1 hole

### Storage:

1	C7806-4E	Box-insert Electrochemistry
1	P7806-1A	Plastic box small, with cover. Plan for storage of all components



## C9900-4C Distillation (GL)

Qty.	Item No.	Description
1	C3601-01	Flask with round bottom and narrow neck
1	C3601-03	Adapter for distillation
1	C3601-06	Cooling tube, 2 screw-on lids and 2 plastic hose connectors with screw-on lids
1	C3601-21	Gas discharge tube, curved
1	C6514-13	Thermometer, chemical, -10 ... +110 °C, filled with alcohol

### Storage:

1	P7806-1A	Storage box, small
1	C7806-4C	Foam insert for distillation (GL)

### Ordering information for Module CHEMISTRY

C9900-4A	Chemistry/Stand
C9900-4B	Chemistry/Glass
C9160-4A	Manual Chemistry

### Suggested accessories:

C9900-4E	Electrochemistry
C9900-4C	Destillation (GL)
P3130-3D	Student power Supply
P3240-1C	Measuring instrument



# Experiments with chemistry

## CHS 1.1

- CHS 1.1.1 Some methods of physically separating substances
- CHS 1.1.1.1 Where did the salt go?
- CHS 1.1.1.2 Why fish can breathe - air in water
- CHS 1.1.1.3 On the gold diggers' trail decantation
- CHS 1.1.1.4 Salt from blood and claws evaporation
- CHS 1.1.1.5 Your Own Sewage Treatment Plant
- CHS 1.1.1.6 A miraculous method of bleaching distillation
- CHS 1.1.1.7 Like a gem crystallization
- CHS 1.1.1.8 Who is who?
- CHS 1.1.2 Dissolving Bonds by Chemical Reaction
- CHS 1.1.2.1 Carbon from sugar/ How sugar carbonizes
- CHS 1.1.2.2 The effervescent powder factory
- CHS 1.1.3 Chemical Elements Can be Derived from Compounds
- CHS 1.1.3.1 Black from white/ extracting carbon
- CHS 1.1.3.2 The golden nail
- CHS 1.1.3.3 The reflector tube

## CHS 1.2

- CHS 1.2.1 Conductivity of different materials
- CHS 1.2.1.1 When does the light bulb glow?
- CHS 1.2.1.2 Following Ritter's footsteps
- CHS 1.2.2 Bonding of ions (ion lattice, ion movement)
- CHS 1.2.2.1 It doesn't dissolve!
- CHS 1.2.2.2 Remarkably unremarkable
- CHS 1.2.2.3 With the water comes the colour
- CHS 1.2.2.4 Like a hygrometer
- CHS 1.2.2.5 The wanderers

## CHS 1.3

- CHS 1.3.1 Electrolysis of a salt solution
- CHS 1.3.1.1 Brown stripes/ Electrolysis of a zinc oxide solution
- CHS 1.3.1.2 The reverse/ Electrolysis of a copper sulfate solution
- CHS 1.3.1.3 Exchanging electrodes
- CHS 1.3.2 Technical significance of electrolysis
- CHS 1.3.2.1 Signs of decay/ Electrolytic refinement of copper
- CHS 1.3.2.2 The decorative key/ Copper plating a key

## CHS 2.1

- CHS 2.1.1 Changing the characteristics of substances – typical features of reactions
- CHS 2.1.1.1 Two color printing
- CHS 2.1.1.2 Gas is free/ development of gases
- CHS 2.1.1.2 The red flame of alcohol
- CHS 2.1.1.3 Smell
- CHS 2.1.2 Difference between physical and chemical characteristics and phenomena
- CHS 2.1.2.1 Sweet and smoky
- CHS 2.1.2.2 Violet-blue smoke and the cure for goiter/ Iodine - physically and chemically

## CHS 2.2

- CHS 2.2.1 Composition of water
- CHS 2.2.1.1 The water maker
- CHS 2.2.2 Reaction of water and oxygen
- CHS 2.2.2.1 Oxyhydrogen
- CHS 2.2.3 Different Characteristics of Water Compounds with Hydrogen and Oxygen
- CHS 2.2.3.1 Why an iceberg floats
- CHS 2.2.3.2 The red geyser
- CHS 2.2.3.3 Burning foam

## Pure substances are rarely found in the nature

- Some methods of physically separating substances
- Where did the salt go?
- Why fish can breathe - air in water
- On the gold diggers' trail decantation
- Salt from blood and claws evaporation
- Your Own Sewage Treatment Plant
- A miraculous method of bleaching distillation
- Like a gem crystallization
- Who is who?
- Dissolving Bonds by Chemical Reaction
- Carbon from sugar/ How sugar carbonizes
- The effervescent powder factory
- Chemical Elements Can be Derived from Compounds
- Black from white/ extracting carbon
- The golden nail
- The reflector tube

## Electrical Conductors and Insulators

- Conductivity of different materials
- When does the light bulb glow?
- Following Ritter's footsteps
- Bonding of ions (ion lattice, ion movement)
- It doesn't dissolve!
- Remarkably unremarkable
- With the water comes the colour
- Like a hygrometer
- The wanderers

## New substances may be formed using electric current

- Electrolysis of a salt solution
- Brown stripes/ Electrolysis of a zinc oxide solution
- The reverse/ Electrolysis of a copper sulfate solution
- Exchanging electrodes
- Technical significance of electrolysis
- Signs of decay/ Electrolytic refinement of copper
- The decorative key/ Copper plating a key

## Chemistry – the world of substances

- Changing the characteristics of substances – typical features of reactions
- Two color printing
- Gas is free/ development of gases
- The red flame of alcohol
- Smell
- Difference between physical and chemical characteristics and phenomena
- Sweet and smoky
- Violet-blue smoke and the cure for goiter/ Iodine - physically and chemically

## Water seen chemically

- Composition of water
- The water maker
- Reaction of water and oxygen
- Oxyhydrogen
- Different Characteristics of Water Compounds with Hydrogen and Oxygen
- Why an iceberg floats
- The red geyser
- Burning foam

## CHS 2.2.4

- CHS 2.2.4.1 Almost Invisible/ Solids in water
- CHS 2.2.4.2 Similar things dissolve in each other/ Fluids in water
- CHS 2.2.4.3 Gasoline pollution
- CHS 2.2.5 Oxidation and reduction
- CHS 2.2.5.1 Magic straw
- CHS 2.2.5.2 Dust explosion
- CHS 2.2.5.3 Carbon is very attractive
- CHS 2.2.6 Reaction energy (exothermic and endothermic reactions)
- CHS 2.2.6.1 Heat must be
- CHS 2.2.6.2 Pocket hot water bottle

## CHS 2.3

- CHS 2.3.1 Dosage - concentration
- CHS 2.3.1.1 Tracking down ppm
- CHS 2.3.2 Working with chemicals in the home
- CHS 2.3.2.1 Clean as a whistle
- CHS 2.3.3 Working with flammable substances and solvents - fighting fires
- CHS 2.3.3.1 Burn-off
- CHS 2.3.3.2 Cold shock
- CHS 2.3.3.3 Never use water
- CHS 2.3.3.4 Eliminating oxygen: be careful of overpressure

## CHS 2.4

- CHS 2.4.1 Testing for acidic and basic substances in water solutions using indicators
- CHS 2.4.1.1 Kitchen chemistry
- CHS 2.4.2 Measuring pH
- CHS 2.4.2.1 An almost homeopathic dosage
- CHS 2.4.3 Electrical conductivity of acids and bases
- CHS 2.4.3.1 Acidic conductor
- CHS 2.4.3.2 Basic conductor
- CHS 2.4.4 Hydrochloric, sulphuric, nitric and acetic acid
- CHS 2.4.4.1 Wait until dark
- CHS 2.4.4.2 A thirsty gas
- CHS 2.4.4.3 Not for x-rays
- CHS 2.4.4.4 Divided water
- CHS 2.4.4.5 Copper's enemy
- CHS 2.4.5 Caustic soda solution, slaked lime, ammonia
- CHS 2.4.5.1 A slippery matter
- CHS 2.4.5.2 Careful of the cold pit
- CHS 2.4.5.3 November fog
- CHS 2.4.6 Neutralization
- CHS 2.4.6.1 Plaster factory

## CHS 2.5

- CHS 2.5.1 Composition of air (nitrogen, oxygen)
- CHS 2.5.1.1 Caution: lack of air!
- CHS 2.5.1.2 Mofette
- CHS 2.5.2 Combustion - flame - respiration
- CHS 2.5.2.1 A glowing spot
- CHS 2.5.2.2 Playing with fire
- CHS 2.5.2.3 Take your breath away
- CHS 2.5.3 Oxides as reaction products of substances containing oxygen
- CHS 2.5.3.1 Red hot
- CHS 2.5.3.2 What the Romans drank from
- CHS 2.5.4 Pollutants in the air due to combustion

## Water as a pure substance and a solvent

- Almost Invisible/ Solids in water
- Similar things dissolve in each other/ Fluids in water
- Gasoline pollution
- Oxidation and reduction
- Magic straw
- Dust explosion
- Carbon is very attractive
- Reaction energy (exothermic and endothermic reactions)
- Heat must be
- Pocket hot water bottle

## Chemicals in daily life - it all depends on the dosage

- Dosage - concentration
- Tracking down ppm
- Working with chemicals in the home
- Clean as a whistle
- Working with flammable substances and solvents - fighting fires
- Burn-off
- Cold shock
- Never use water
- Eliminating oxygen: be careful of overpressure

## Acids and bases in daily life

- Testing for acidic and basic substances in water solutions using indicators
- Kitchen chemistry
- Measuring pH
- An almost homeopathic dosage
- Electrical conductivity of acids and bases
- Acidic conductor
- Basic conductor
- Hydrochloric, sulphuric, nitric and acetic acid
- Wait until dark
- A thirsty gas
- Not for x-rays
- Divided water
- Copper's enemy
- Caustic soda solution, slaked lime, ammonia
- A slippery matter
- Careful of the cold pit
- November fog
- Neutralization
- Plaster factory

## Air - the life substance

- Composition of air (nitrogen, oxygen)
- Caution: lack of air!
- Mofette
- Combustion - flame - respiration
- A glowing spot
- Playing with fire
- Take your breath away
- Oxides as reaction products of substances containing oxygen
- Red hot
- What the Romans drank from
- Pollutants in the air due to combustion

# 135 experiments in total



- (carbon dioxide, sulphur dioxide, nitric oxide)
- CHS 2.5.4.1 The splint goes out
- CHS 2.5.4.2 Who is swallowing the gas?
- CHS 2.5.4.3 Works even against soot
- CHS 2.5.4.4 Gas mask
- CHS 2.5.5 Other pollutants (dusts)
- CHS 2.5.5.1 Keeps only flies out

## CHS 2.6 Natural substances and synthetic products

- CHS 2.6.1 The elements sodium and chloride (alkali and halogen compounds)
- CHS 2.6.1.1 Preparatory chemistry
- CHS 2.6.1.2 Photo lab
- CHS 2.6.1.3 Bacteria killer
- CHS 2.6.2 Comparison of table salt as a natural substance and a synthetic product
- CHS 2.6.2.1 Nature versus synthesis
- CHS 2.6.3 Some properties of table salt (sodium chloride)
- CHS 2.6.3.1 Just like before
- CHS 2.6.3.2 Learning from nature
- CHS 2.6.4 Electrolysis of table salt
- CHS 2.6.4.1 Poor table salt

## CHS 2.7 Substances in the working world

- CHS 2.7.1 Iron
- CHS 2.7.1.1 Colourful spread
- CHS 2.7.1.2 Cars rust quickly in winter
- CHS 2.7.2 Aluminium
- CHS 2.7.2.1 Burning metal
- CHS 2.7.2.2 Colourful sheet metal
- CHS 2.7.3 Fertilizer
- CHS 2.7.3.1 Kastner's idea
- CHS 2.7.4 Mineral building materials
- CHS 2.7.4.1 Rock without gas
- CHS 2.7.4.2 Plaster fingers
- CHS 2.7.4.2 Test of hardness
- CHS 2.7.4.3 Brick factory
- CHS 2.7.5 Carbon
- CHS 2.7.5.1 Small coking plant
- CHS 2.7.6 Natural gas and oil products
- CHS 2.7.6.1 Gas from the earth's crust
- CHS 2.7.6.2 Properties of gasoline
- CHS 2.7.6.3 Winter oil
- CHS 2.7.7 Some carbohydrates
- CHS 2.7.7.1 Sniffing substance
- CHS 2.7.7.2 The three-armed "ine"
- CHS 2.7.7.3 When does candle wax melt?

## CHS 2.8 Chemistry - natural and industrial synthetics

- CHS 2.8.1 Photosynthesis
- CHS 2.8.1.1 Natural colours
- CHS 2.8.1.2 A tiny cell
- CHS 2.8.2 Wood and cellulose
- CHS 2.8.2.1 Poor charcoal burner
- CHS 2.8.2.2 Lignum
- CHS 2.8.3 Natural and synthetic fibres
- CHS 2.8.3.1 What is a sweater made of?
- CHS 2.8.4 Plastics
- CHS 2.8.4.1 Separation
- CHS 2.8.4.2 Half as light as aluminium
- CHS 2.8.5 Caoutchouc and rubber
- CHS 2.8.5.1 Goodyear's discovery

## CHS 2.9

- CHS 2.9.1 Ethanol and alcoholic fermentation
- CHS 2.9.1.1 Strong spirits
- CHS 2.9.1.2 Alcohol test
- CHS 2.9.1.3 A hasty storm
- CHS 2.9.2 Comparison of bases and alcohols
- CHS 2.9.2.1 Almost a base
- CHS 2.9.2.2 Only one conducts electricity
- CHS 2.9.3 Other alcohols
- CHS 2.9.3.1 The other alcohol
- CHS 2.9.4 Acetic acid fermentation and acetic acid
- CHS 2.9.4.1 Sour beer
- CHS 2.9.4.2 Which acid is it?
- CHS 2.9.5 Carbonic acids
- CHS 2.9.5.1 Souring agent
- CHS 2.9.6 Formation of esters
- CHS 2.9.6.1 Metha piperita

## Alcohol and carbonic Acids

## CHS 2.10

- CHS 2.10.1.1 What removes the spot?
- CHS 2.10.1.2 Fat spots
- CHS 2.10.2 Carbohydrates
- CHS 2.10.2.1 What do fattening foods consist of?
- CHS 2.10.2.2 Raisin juice
- CHS 2.10.2.3 Kitchen duty
- CHS 2.10.2.4 Spittoon
- CHS 2.10.3 Proteins
- CHS 2.10.3.1 Protein - even for vegetarians
- CHS 2.10.3.2 White - red - black
- CHS 2.10.3.3 Fever!
- CHS 2.10.4 Vitamins
- CHS 2.10.4.1 Anti-scurvy vitamin
- CHS 2.10.5 Minerals
- CHS 2.10.5.1 Whey
- CHS 2.10.6 Preserving foods
- CHS 2.10.6.1 Shock freezing
- CHS 2.10.6.2 Muesli additive

## Foods and nutrients

## CHS 2.11

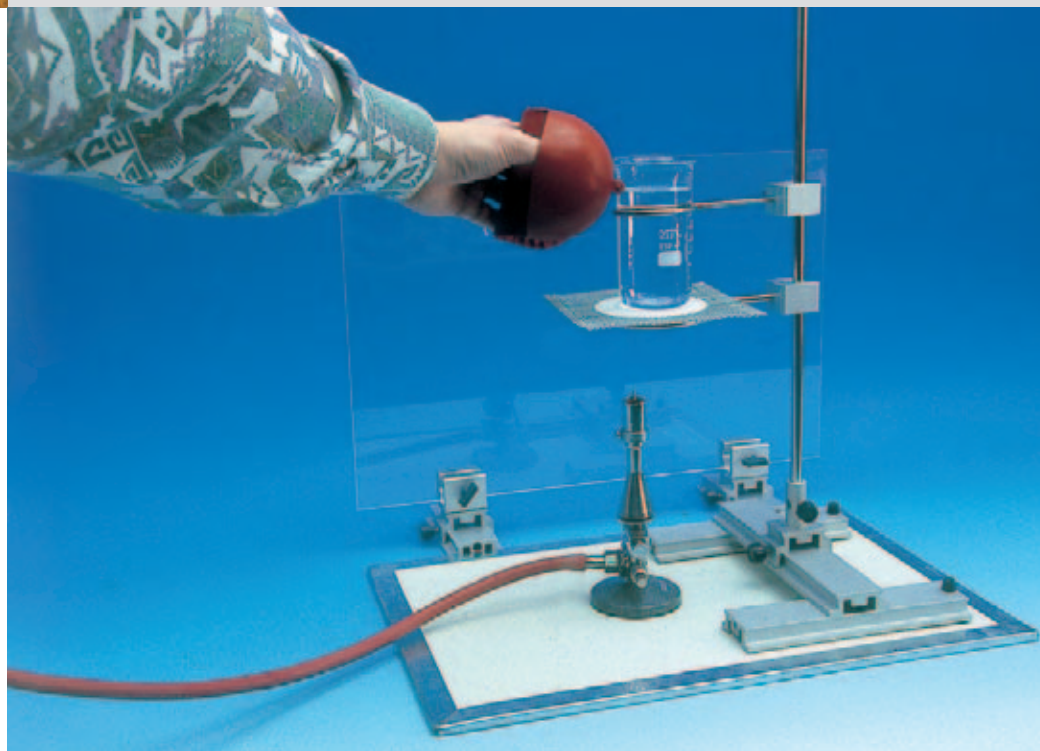
- CHS 2.11.1 Detergents
- CHS 2.11.1.1 Retreat
- CHS 2.11.1.2 Dirty water
- CHS 2.11.2 Hard and soft water
- CHS 2.11.2.1 How hard is the water?
- CHS 2.11.3 Soaps
- CHS 2.11.3.1 Cooking soap
- CHS 2.11.4 Spot remover
- CHS 2.11.4.1 Spot remover

## Substances for cleaning and hygiene



# chemistry - accessories

WE PAY A LOT OF ATTENTION TO SAFETY!



## Butane burner:

- 1 P2110-1A Butane burner
- 2 P2110-1C Gas cartridge, pierced, or
- 3 P2110-1V Gas cartridge with valve



## Additional accessories:

- 4 C6005-1B Washing bottle, 500 ml
- 5 C7447-1B Water tank, plastic, 260x160x100 mm
- 6 C7605-1S Protective goggles with side protection



Not shown:

- C7227-1B Protective screen, 500x330 mm
- C7225-1A Protective ceramic plate in metal frame, 500x330 mm

## Teclu burner: (flame temperature approx. 1300 °C)

Article no.	Technical Data	Gas Type	Height	Weight
7 C7410-1A	Air regulator and needle valve	Natural gas	165 mm	285 g
C7410-1B	Air regulator and needle valve	Propan	165 mm	285 g
8 C7410-2A	Air regulator, needle valve, igniting safety and economy flame	Natural gas	180 mm	745 g
C7410-2B	Air regulator, needle valve, igniting safety and economy flame	Propane	180 mm	745 g



Other burners and accessories may be found on pages 216 and 217



## CH9900-1A Chemical set for student experiments

Qty.	Item No.	Description	Qty.	Item No.	Description
1	CH00430	Acetone, 500 ml	1	CH35000	Sodium acetate 3-hydrate, 50 g
1	CH02060	Active carbon, powder, 250 g	1	CH35620	Sodium carbonate, anhydrous (soda), 1 kg
1	CH03610	Ammonia solution, 25%, 1 l	1	CH35720	sodium chloride, 1 kg
1	CH04550	Ammonia molybdate solution, saturated, 50 ml	1	CH36600	Sodium hydrogen carbonate, 250 g
1	CH04700	Ammonia oxalate, 50 g	1	CH36820	Sodium hydroxide, tabs, 1 kg
1	CH07200	Barium chloride, 100 g	1	CH37620	Sodium sulphate 10-hydrate, 500g
1	CH08230	Benzine, 90°C-110°C, 1 l	1	CH37800	Sodium sulphite, 100 g
1	CH08300	Benzoic acid, 50 g	1	CH38010	Sodium thiosulphate 5-hydrate, 250 g
1	CH09400	Lead (II) acetate, 50 g	1	CH42400	Phenolphthalein, 5 g
1	CH09430	Lead (II) acetate paper, container	1	CH42810	Phloroglucin, 25 g
1	CH09600	Lead (II) nitrate, 100 g	1	CH44950	Quartz sand, 100 g
1	CH09700	Lead (II) oxide, 250 g	1	CH46610	Nitric acid, 65%, 500 ml
1	CH09990	Burner alcohol, 1 l	1	CH46770	Hydrochloric acid, concentrated, 25%, 2.5 l
1	CH11000	1 - Butanol (n-butyl alcohol), 250 ml	1	CH47510	Sulphur, crystalline, 250 g
1	CH12200	Calcium carbide, ground, 100 g	1	CH47870	Sulphuric acid, 95%-98%, 1 l
1	CH12320	Calcium carbonate, precipitated, 1 kg	1	CH48610	Silver nitrate, 25 g
1	CH12400	Calcium chloride, ground, 100 g	1	CH49210	Starch, soluble, 250 g
1	CH12910	Calcium hydroxide, 500 g	1	CH49420	Strontium nitrate, 250 g
1	CH13300	Calcium oxide, in pieces, 250 g	1	CH53270	Vitamin C (ascorbic acid), 50 g
1	CH13410	Calcium sulphate-2-hydrate, precipitated, 1 kg	1	CH53510	Hydrogen peroxide, 30%, 1 l
1	CH15610	Citric acid-1-hydrate, precipitated, 250 g	1	CH54820	Zinc, ground, arsenic-free, 1 kg
1	CH18270	Iron, coarse powder, 500 g	1	CH54900	Zinc, powder, 100 g
1	CH18600	Iron (III) chloride, anhydrous, 50 g	1	CH55110	Zinc chloride, dry, 250 g
1	CH19000	Iron (III) oxide, 100 g	1	CH55220	Zinc iodide, 25 g
1	CH19200	Iron (II) sulphide, pieces, 250 g			
1	CH19310	Eosine, yellowish, 25 g			
1	CH19500	Acetic acid, 99-100%, 250 ml			
1	CH19720	Ethanol solvent, 1 l			
1	CH19910	Fehling's solution I, 250 ml			
1	CH20010	Fehling's solution II, 250 ml			
1	CH21010	Glass wool, 100 g			
1	CH21210	Glycerine, 99%, 250 ml			
1	CH22210	n-Hexane, 250 ml			
1	C6805-3P	Indicator paper, pH 1-11, in container with scale			
1	C6805-3N	Indicator paper, pH 1-11, 3 replacement rolls			
1	CH24630	Potassium aluminium sulphate, 500 g			
1	CH25210	Potassium chloride, 250 g			
1	CH25600	Potassium dichromate, 50 g			
1	CH26100	Potassium hexacyanoferrate (III), 50 g			
1	CH26400	Potassium hydroxide, tabs, 250 g			
1	CH26600	Potassium iodide, 25 g			
1	CH26820	Potassium nitrate, 500 g			
1	CH27000	Potassium permanganate, 100 g			
1	CH27400	Potassium thiocyanate, 100 g			
1	CH28000	Cobalt (II) chloride 6-hydrate, 25 g			
1	CH28800	Copper, powder, 50 g			
1	CH29110	Copper (II) chloride, 100 g			
1	CH29510	Copper (II) oxide, 100 g			
1	CH29710	Copper (II) sulphate, anhydrous, 250 g			
1	CH29910	Litmus, 25 g			
1	C6805-1N	Litmus paper, neutral, pad			
1	CH31000	Magnesium ribbon, 25 g			
1	CH31100	Magnesium, powder, 50 g			
1	CH31500	Magnesium oxide, 50 g			
1	CH32210	Manganese (IV) oxide, 500g			
1	CH32700	Methanol, 250 ml			
1	CH32910	Methyl blue, 25g			

