

ALBA Chemistry Disk 1

Installing the Software for the USB Version of ALBA

The ALBA software runs on computers with the Windows XP operating system or later. Versions 2.00 and greater of the ALBA software support both the serial port and USB versions of the ALBA Interface and Logger.

If the installation does not start automatically then type *D:\setup.exe* from the “run” command where D is the letter of your CD-ROM drive.

There are several parts to the installation:

- The first part installs the latest ALBA core, the Help file and manual.
- Next the software asks you if you wish to install the USB drivers. If you are using only the older serial port ALBAs then you do not need to install the USB drivers. If you are using a USB ALBA and already have the drivers installed from other ALBA disks then you may answer No to this else answer Yes. Note that answering Yes when the drivers are already installed is ok. If you have a mixture of serial port and USB in your lab then all your computers should have the USB drivers installed.
- Next the Applications are installed.
- Finally you are asked if you wish to install the Adobe Acrobat Reader.

Note that if in the future you wish to uninstall the ALBA software there are two parts to uninstall: the ALBA Core and the Applications.

Users may make as many copies of the manual as they wish for use within their educational establishment.

To uninstall the drivers and associated registry entries do the following :

- Go to <http://www.fdichip.com/Resources/Utilities.htm> and download the utility FTClean – Driver Removal Utility.
- Run the file FTClean.exe
- Now from the Control Panel select *Add or Remove Software*. Scroll down until you see two copies of *Windows Driver Package – FTDI CDM Driver Package*. Remove both of them.

Windows 98

djb microtech does not officially support the older operating systems. However the ALBA software does run on windows 98 and ME and users with these operating systems will have to install the USB drivers manually.

The following steps may help you :

- After installing the ALBA software connect the ALBA Interface and Logger to your PC. A message will appear telling you that new hardware has been found.
- The next window displays *Please insert the disk labeled 'FTDI USB Driver Disk', and then click ok*. You do not have this disk – just click ok to dismiss the window.
- At the bottom of the next window you will see *'Copy files from:'* and a location underneath. Replace this location with *D:\Drivers\Win98* where D is the letter of your CD-ROM drive. Alternatively you can click the browse button and navigate to the folder containing the 98 drivers on your CD.
- Now click OK to install the drivers.

Your ALBA Interface and Logger should now work when the ALBA software is launched.

Please note that if you have several ALBA Interfaces then you will have to go through this procedure for each ALBA on each computer. If you find yourself in this position please contact djb microtech.

Contents of CD - ROM

Conductivity - water & solutions

ALBA, serial lead and plug top supply, conductivity sensor, 0.05 M hydrochloric acid, ethanoic acid, and sodium hydroxide, solid sodium chloride, distilled water, 0.01g balance, 4 x 100ml & 250ml beaker, 1000 μ S NaCl solution (provided with sensor) OR 10,000 μ S (5.566 g of Analar NaCl per litre of de-ionised water), 0 μ S (in air)

Conductivity & pH - acids/bases

ALBA, serial lead and plug top power supply, pH electrode and connecting box, conductivity sensors, distilled water, 0.05M solutions of hydrochloric acid, ethanoic acid, sodium hydroxide and ammonia, 4 x 100ml & 1 x 250ml beaker. Optional: buffer solutions pH 4 & 10, 1000 μ S NaCl solution (provided with sensor) OR 10,000 μ S NaCl solution (5.566 g of Analar NaCl per litre of de-ionised water), 0 μ S (in air)

Light - Persulphate/iodide Rate

ALBA, serial lead and plug top supply, light sensor, 12V MES lamp, 12V DC power supply, 0.1 M solution of sodium persulphate (23.8 g l⁻¹), potassium iodide/sodium thiosulphate (50g of KI + 6 cm³ of 1 M thiosulphate in one litre of solution), fresh starch solution, 10ml syringe, 2 x 50ml measuring cylinders, 100ml beaker

Light - Thiosulphate/Acid Rate

ALBA, serial lead and plug top supply, light sensor, 12V 2.4W MES lamp, 12V DC power supply, 60 g l⁻¹ sodium thiosulphate, 0.1 M hydrochloric acid, 50ml measuring cylinder, 10ml syringe, 2x100ml beakers

pH - Buffers

ALBA, serial lead and plug top supply, pH electrode and connecting box, magnetic stirrer and flea, 50 ml burette, pH 7 buffer solution, distilled water, 0.01 M sodium hydroxide and hydrochloric acid

pH - Common Solutions

ALBA, serial lead and plug top supply, pH electrode, connecting box, pH 7 buffer solution, distilled water, universal indicator, solutions of common laboratory and house chemicals, 8 boiling tubes in rack, 250ml beaker.
Optional: buffer solutions pH 4 and 10.

pH - Neutralization

ALBA, serial lead and plug top supply, pH electrode, connecting box, magnetic stirrer and flea, 0.1M solutions of HCl, NaOH, CH₃COOH and NH₃(aq), universal indicator, 25ml pipette, 2x50ml burettes, 100ml beaker.
Optional: buffer solutions pH 4 and 10.

Temperature - Enthalpy of Solution

ALBA, serial lead and plug top supply, temperature sensor, magnetic stirrer and flea (optional), sodium hydroxide pellets, 0.01g balance, polystyrene cup with hole in lid to take temperature probe, 100ml measuring cylinder, clamp stand.

Temperature - Exo/endermthermic Reactions

ALBA, serial lead and plug top supply, temperature sensor, 8 pieces of magnesium ribbon 2/3cm, citric acid, sodium hydrogencarbonate, 1 M hydrochloric acid, polystyrene cup with hole in lid to take temperature probe, 0.1g balance, 100 ml measuring cylinder, clamp stand, large plastic beaker.

Timing - Area/Rate

250ml conical flask fitted with delivery tube and 20ml syringe, 1 M hydrochloric acid, three sizes of marble chips approx (8-10mm, 3-5mm and 1-2mm), 0.1g balance, 100ml measuring cylinder, water trough, 100ml beaker.

Timing - Concentration/Rate

250ml conical flask fitted with delivery tube and 20ml syringe, hydrochloric acid 0.5M, 1M and 2.0 M, marble chips, balance (0.1g), 100ml measuring cylinder, water trough, 100ml beaker, clamp stand.

Timing - Catalysis/Rate

250ml conical flask fitted with delivery tube and 10ml syringe, "10 Volume" hydrogen peroxide, manganese(IV) oxide, catalase solution (10 drops of standard bovine catalase in 10 ml of water), 2 x 100ml measuring cylinders, clamp stand, water trough, 100ml beaker, dropping pipette.

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