

clockwise, until it locks into position. You **must** ensure the autoclave lid is correctly closed. If this is not done properly, the autoclave is extremely dangerous when being heated.

- Check both taps are closed and place the autoclave on a kerosene burner. Some autoclaves are designed to be heated using an electrical supply.



ICEH/LS/HTM

- After several minutes, the steam produced causes the pressure to rise in the autoclave. You can see this on the pressure gauge (3).
- When the pressure reaches 15 +/- 1 psi, steam will come out of the pressure valve. You must record the time at which this happens.
- Continue heating for a further 20–25 minutes. Turn off the heat source.
- Open the lower tap, which is the vacuum release tap. All the steam and water will then drain from the autoclave (4). As soon as the water stops draining, close the tap again and leave the autoclave for 5–10 minutes. A further vacuum develops in the autoclave, which will now dry the sterile contents.
- Then open the upper tap (5), which is the steam release tap, allowing all remaining steam to come out. The pressure gauge should now drop to zero psi.
- Only open the autoclave when the pressure is zero. Then remove the drum and immediately close the vents.

Safety

There are some crucial safety points that you must always follow when using an autoclave.

- You should be well trained in autoclave usage and you should be trained and tested periodically for proficiency in the operation of an autoclave. There is a danger of transmitting HIV, hepatitis viruses, or other infectious diseases if the surgical materials are not properly sterilised. There is also a danger of causing serious injury if the autoclave is not used correctly.
- Always ensure there is the correct amount of water in the autoclave before every use.
- You must **not** open the autoclave until the pressure reaches zero.
- Do **not** use an autoclave if parts are malfunctioning; for example, if the pressure does not rise and there is continual escape of steam.
- Do **not** use if you notice wear and tear on the lid gasket or notice leaky taps and valves.



CONTINUING PROFESSIONAL DEVELOPMENT

**CPD:
Test yourself**

These continuing professional development (CPD) Test Yourself questions are based on the contents of this issue. You can use the questions to test your own understanding; we hope that you will also discuss them with your colleagues and other members of the eye care team. The questions have been developed in association with the International Council of Ophthalmology (ICO) and are based on the style of the ICO Advanced Examination: www.icoexams.org/exams/advanced

1. Think about purchasing instruments and consumables. Which of the following statements are true, and which are false?		True	False
a	Pre-shipment inspections are expensive, but they are worth the cost.	<input type="checkbox"/>	<input type="checkbox"/>
b	Your supplier is usually responsible for inland transportation.	<input type="checkbox"/>	<input type="checkbox"/>
c	When obtaining a quote, always approach more than one supplier.	<input type="checkbox"/>	<input type="checkbox"/>
d	The Incoterm® CIP means that you are responsible for insurance and clearance charges.	<input type="checkbox"/>	<input type="checkbox"/>
2. Think about instrument care and maintenance. Which of the following statements are true, and which are false?		True	False
a	Instruments must be cleaned after each use and lubricated once a week.	<input type="checkbox"/>	<input type="checkbox"/>
b	Using distilled water to clean instruments reduces the risk of corrosion and chemical damage.	<input type="checkbox"/>	<input type="checkbox"/>
c	Regular inspection is important, but it is not necessary to do so under magnification.	<input type="checkbox"/>	<input type="checkbox"/>
d	It is important to keep records of any instruments requiring repair or replacement.	<input type="checkbox"/>	<input type="checkbox"/>
3. Think about supplies management. Which of the following statements are true, and which are false?		True	False
a	You don't have to make a large order to take advantage of bulk discounts.	<input type="checkbox"/>	<input type="checkbox"/>
b	The people who manage supplies are usually specially trained and enjoy working with complex inventory systems.	<input type="checkbox"/>	<input type="checkbox"/>
c	If an eye unit uses between 20 and 30 sutures a month, and they take between 6 and 8 weeks to arrive, you should keep a minimum 40 sutures in stock (and order more whenever the stock reaches 40).	<input type="checkbox"/>	<input type="checkbox"/>
d	The 'first in, first out' approach means that you must use the items with the shortest shelf life first.	<input type="checkbox"/>	<input type="checkbox"/>
4. Think about performing Schirmer's test and about sharpening and adjusting surgical scissors. Which of the following are true and which are false?		True	False
a	When performing Schirmer's test, patients must close their eyes as tightly as possible.	<input type="checkbox"/>	<input type="checkbox"/>
b	Performing Schirmer's test soon after instilling any eyedrops will give a false result.	<input type="checkbox"/>	<input type="checkbox"/>
c	When sharpening surgical scissors, don't be afraid to apply pressure with the sharpening stone.	<input type="checkbox"/>	<input type="checkbox"/>
d	When sharpening surgical scissors, cover the full length of the cutting surface with each stroke.	<input type="checkbox"/>	<input type="checkbox"/>

ANSWERS

1. **a. False.** If your country does not require one, only consider a pre-shipment inspection (PSI) if you are making a large order. A PSI may speed up clearance on arrival, but will increase the price by 2-3%. You should decide whether the cost is worth it. **b. False.** You are responsible, unless you have chosen for the items to be couriered to you (i.e., door-to-door delivery). **c. True, d. False.** You are responsible for clearance, but marine insurance is the seller's responsibility.
2. **a. False.** Instruments should be cleaned and lubricated after each use. **b. True, c. False.** Use magnification whenever possible to help you identify instruments that must be repaired or serviced. **d. True.** This allows you to plan ahead so you can replace or repair instruments as needed.
3. **a. True.** You can negotiate a discount based on projected demand. **b. False.** Make sure your inventory systems are easy and convenient to use. **c. False.** Stock may take as long as 8 weeks to arrive (around 2 months), and you may use as much as 30 sutures a month, so keep enough to last until then (2 x 30 = 60). **d. True.**
4. **a. False.** Patients must close their eyes as tightly as possible. **b. True, c. False.** Do not apply too much force. The repetition of the movement is what sharpens the scissors. **d. True.**