

StatSpin®
An IRIS Company

**CenSlide®
2000**

Urinalysis System



**OPERATOR'S
MANUAL**

Please read the entire Operator's Manual prior to operating the CenSlide Centrifuge.

This manual includes easy-to-follow instructions, technical information about the CenSlide 2000 Urinalysis System, maintenance instructions, and a simple trouble shooting guide.

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The CenSlide 2000 Urinalysis System is a closed system used in performing microscopic examinations of urine.

For *In vitro* diagnostic use.

1.0 General

The CenSlide 2000 Urinalysis System reduces exposure to biohazardous materials and helps laboratories control inherent variations in conventional microscopic analysis by standardizing urine sediment volume, centrifuge conditions, and technician technique. Unique in its simplicity, this advanced system is easy to use yet can dramatically reduce the number of steps and time required to process and review a specimen.

The CenSlide 2000 Urinalysis System includes the CenSlide 2000 Centrifuge and CenSlide tubes (Figure 1.1).



Figure 1.1

The patented CenSlide tube is both a centrifuge tube and microscope slide, eliminating the need for slides, coverslips and specimen transfer. Once a urine sample is dispensed into a CenSlide tube and the cap is put in place, you never need to open the tube again; greatly reducing the possibility of spills and contamination.

The CenSlide 2000 Centrifuge is microprocessor-controlled to automatically spin CenSlide tubes for a preprogrammed time and speed. At the end of the centrifuge cycle, the urine sediment is redistributed evenly across the viewing area of the CenSlide tube, completely ready for microscopic analysis.

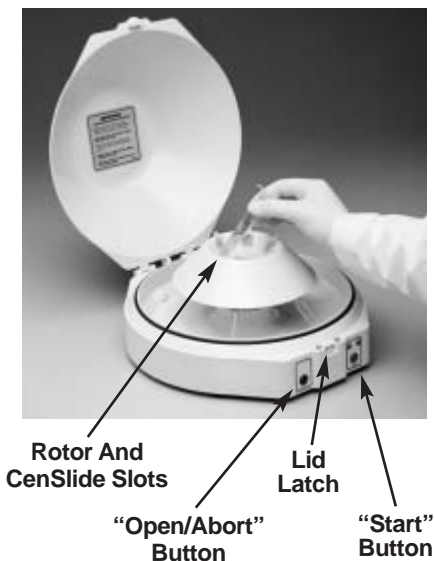
The CenSlide tube inserts directly into a CenSlide Tube Holder which is located on the microscope platform. The CenSlide Tube Holder positions each CenSlide tube in the same place on the microscope. Once you focus on the first CenSlide tube each succeeding tube will automatically be in focus.

The urine sediment is easily visualized and counted through its patented transparent tip, and correlates exceptionally well with conventional methods.

1.1 CenSlide 2000 Centrifuge

The CenSlide 2000 Centrifuge (Figure 1.2) is used exclusively with the CenSlide tubes to provide a rapid and accurate urinalysis. It automatically spins to the appropriate g-force, shuts off, and flicks the CenSlide tubes viewing area to ensure even distribution of the sediment.

Figure 1.2



1.2 CenSlide Tubes

The patented CenSlide tube (Figure 1.3) is a combination tube and microscope slide.

The CenSlide tube reduces processing time, and eliminates errors associated with decanting the supernatant and resuspending the microscopic particles thereby increasing precision and accuracy.

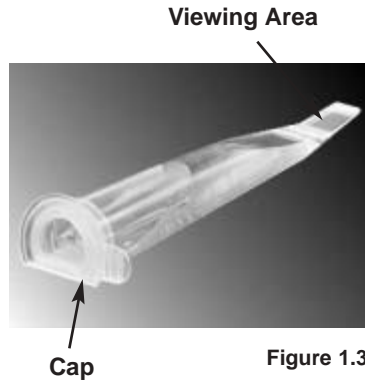


Figure 1.3

The CenSlide tube holds 5 mL of urine, which is centrifuged and the resulting sediment is automatically resuspended in its built-in viewing area for microscopic examination. The CenSlide 2000 Urinalysis System has been clinically tested and shown to correlate favorably with tests performed by the standard microscope slide and KOVA[®] methods.

1.3 CenSlide 2000 Centrifuge Specifications

Power Requirements

Model	Power Supply Mains
M401-12 (Product No. 2C-9000-001)	120 VAC, 60 Hz, 26 W
M401-22 (Product No. 2C-9000-22)	90-240 VAC, 50/60 Hz, 26 W

Centrifuge Motor 24 VDC, Brush Type,
Solid State Microprocessor
Controlled

Lid and Bowl One piece molded Nylon plastic

Centrifuge Cycle

Ramp to 1350 rpm $\pm 10\%$. . \approx 15 seconds
Hold 1350 rpm \approx 15 seconds
Ramp down to 400 rpm . . \approx 15 seconds
Flick tube \approx 2 seconds

Centrifugal Force 97 xg

Power Consumption 20 W

Physical Dimensions

Height: 5.6" (14.2 cm)
Width: 11.4" (29.0 cm)
Depth: 12.9" (32.8 cm)
Weight: 9 lbs. (4.1 Kg)

Environmental Conditions

Indoor Use • Altitude up to 2000m • Temperature 5°C to 40°C
Maximum relative humidity 80% for temperatures up to 31°C
decreasing linearly to 50% relative humidity at 40°C
Main supply voltage fluctuations not to exceed $\pm 10\%$
of the nominal voltage
Transient overvoltages according to installation category II
Pollution degree 2

Rotor 6 Position, fixed 45° angle,
Nylon plastic

Switches Pressure sensitive membrane

1.4 CenSlide Tube Specifications

Description

Disposable, non-sterile, shatterproof, polypropylene plastic molded tube with clear viewing area incorporated. Tubes are packaged with recessive leak-resistant caps in shrink-wrapped boxes.

Dimensions

"D" shaped taper, 110mm long x 21mm wide

Viewing Area Dimensions

7.9mm (w) x 10.7mm (l) x 0.25mm (h)

Total Volume

5.0 mL

Storage Conditions

Store at room temperature (20°C to 30°C)

CenSlide is a registered trademark and the CenSlide tube is a patented (5,260,032) product of International Remote Imaging Systems, Inc.

CenSlide Power Supply

Statspin Part No.	Description	Mfg.	Model No.
01-3553-001	AC Power Adapter	APS	AD-740U-1240
(For use with all CenSlide 2000 centrifuges)			
01-3581-001	AC Transformer	Leader	A48240800
(For use with 2C-9000-001 only)			

This chapter covers the installation and general operation of the CenSlide 2000 Urinalysis System.

2.0 Installing the Censlide 2000 Centrifuge

After removing the CenSlide 2000 Centrifuge from its box, place it on a level working surface close to an electrical outlet. The CenSlide 2000 Centrifuge operates on 24 volts, supplied by an external power supply module. Plug the power supply module into the electrical outlet, and its power cord into the centrifuge's power receptacle located at the back of the centrifuge (Figure 2.1). Mark a 300 mm clearance boundary around the centrifuge to allow adequate ventilation and safety.



Figure 2.1

Please use only the power supply provided with the equipment. To turn unit completely off, disconnect power plug-in located at the rear of the instrument.

2.1 Safety Features

The CenSlide 2000 Centrifuge uses an electronically controlled locking mechanism to prevent the centrifuge from being:

1. Operated, except when the lid is completely closed and latched; or,
2. Opened, while the centrifuge is in operation.



IMPORTANT: *Do not attempt to defeat any safety features of this equipment. If the equipment is not used correctly, protection provided by the equipment will be impaired.*

To reduce the risk of injury -

- *Do not operate with an unbalanced load.*
- *Inspect rotor for fatigue.*

CAUTION: *Incorrect tubes may damage rotor.*

NO USER SERVICABLE PARTS -

Refer all service to qualified service personnel.

2.2 Precautions

The CenSlide 2000 Centrifuge is designed to concentrate urine sediment in CenSlide tubes for diagnostic testing. Therefore, use of the CenSlide 2000 Centrifuge places a responsibility upon administrative personnel to ensure adequate training of operators as to the safe and effective use of the centrifuge.

2.3 Hazards

The CenSlide 2000 Centrifuge is not explosion-proof and should not be used in a potentially explosive atmosphere.

2.4 Preparing the Centrifuge for Use

When the CenSlide 2000 Centrifuge is plugged in, a tone will sound, its lid will open about one-eighth of an inch and the green "READY" light on the right side of the control panel will flash. Open the lid fully, by manually lifting it until it rests on its back support.

2.5 Preparing Censlide Tubes for Centrifugation

At this time, remove, complete and mail the CenSlide 2000 Centrifuge Warranty Card. This will activate the warranty on your centrifuge and assure your receipt of pertinent follow-up product information.

1. Label a CenSlide tube with the appropriate patient information.
2. A first morning specimen with an acid pH is recommended because it is concentrated and more likely to contain casts than a dilute alkaline afternoon specimen.
Dispense a sample for analysis as follows:
 - a. Shake the urine collection container sufficiently to resuspend the particles uniformly in the urine.
 - b. Remove the lid from the urine collection container and pour the urine into the open end of a CenSlide tube up to the line directly above the arrow (5 mL).
3. If requested, insert a chemistry urinalysis test strip into the CenSlide tube and tilt the tube slightly to ensure that urine completely covers the uppermost pad.

4. If stain is required, add it to the sample after the chemistry test strip has been removed and read (Figure 2.2).
5. Place the cap on the CenSlide tube and push down firmly until it clicks and/or its rim is flush with the top of the CenSlide tube.
6. Holding the CenSlide tube just below the cap, align it so that the flat side of the CenSlide tube conforms to the flat side of the slot in the rotor head (Figure 2.3). One to six CenSlide tubes can be placed into the rotor with appropriate counter-balancing.
7. For appropriate counter-balancing, simply place a CenSlide tube with equal volume of urine or water opposite each CenSlide tube placed in the rotor.

**Figure 2.2****Figure 2.3**

8. Seat the CenSlide tube firmly into the rotor slot, pushing down on the cap until the CenSlide tube can go no further. Close the lid.

The lid must be "completely" closed, or the CenSlide 2000 Centrifuge will not operate.

When the lid is properly closed, the green "READY" light on the control panel will stop flashing.

2.6 Centrifuge Operation

1. Press the green "START" button on the control panel of the CenSlide 2000 Centrifuge (Figure 2.4). The amber "CYCLE" light will flash, indicating that the centrifuge is currently in operation.



Figure 2.4

For safety purposes, the lid will not open while the rotor is turning.

Microprocessor technology is used to monitor the speed and time to assure accuracy. Near the end of the cycle, a flicking process (clicking sound) will automatically occur to evenly disperse the sediment in the CenSlide tube.

Note: If the "OPEN/ABORT" button is pressed during operation, the centrifuge will stop. The amber "CYCLE" light will flash slowly and a beep will sound to indicate interruption of the cycle. When the rotor stops, the lid will automatically open. It is recommended that the samples be discarded.

2. At the end of the cycle, an audible beep will sound, the amber "CYCLE" light will go out, the green "READY" light will begin blinking and when the rotor stops, the lid will automatically open.

2.7 Sample Analysis

1. Open the lid and remove the CenSlide tubes.
2. Place the CenSlide tubes into the StakRak™ horizontally (Figure 2.5).

Allow the urine sediment in the tubes to settle for at least one minute prior to viewing.

3. Place a CenSlide Holder onto the microscope stage.
4. Place a CenSlide tube into the CenSlide Holder and position its viewing area under the microscope objective (Figure 2.6).

5. Focus on the viewing area using the microscope's low power (10x) objective and proceed with the microscopic examination.



Figure 2.5

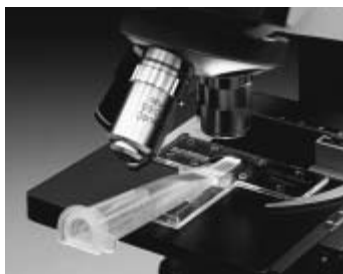


Figure 2.6

Note: Occasionally, uneven distribution of the sediment may occur due to aggregates or clumps of debris (mucous, cells, etc.) forming around the edges of the CenSlide tube's viewing area. When this occurs, count only the fields where elements are evenly dispersed. Avoid counting areas inside the clumps.

2.8 Quality Control

There are a number of commercially available urine controls that contain white blood cells, red blood cells, and crystals that may be used for daily verification of the CenSlide Urinalysis System. The quality control procedures established for your laboratory should be followed.

This chapter covers special procedures, technical specifications, and references.

3.0 Staining

The recommended stain for use with the CenSlide 2000 is a modified Sternheimer-Malbin stain. This stain is commercially available, call StatSpin for source (800-782-8774).

This stain, when used properly, provides increased contrast and specific staining of urinary sediment. This makes recognition of some formed particles, especially casts, easier.

3.0.1 Preparing Censlide Tubes for Centrifugation

1. Label a CenSlide tube with the appropriate patient information.
2. A first morning specimen with an acid pH is recommended because it is concentrated and more likely to contain casts than a dilute alkaline afternoon specimen.

Dispense a sample for analysis as follows:

- a. Shake the urine collection container sufficiently to resuspend the particles uniformly in the urine.
 - b. Remove the lid from the urine collection container and pour the urine into the open end of a CenSlide tube up to the line directly above the arrow (5 mL).
3. If requested, insert a chemistry urinalysis test strip into the CenSlide tube prior to adding stain, and tilt it slightly to assure that urine completely covers the uppermost pad.
 4. Shake the stain bottle before dispensing. Add five to eight drops of the stain to the CenSlide tube (Figure 3.1).



Figure 3.1

***Warning: This product will stain fabrics.
Use caution when dispensing.***

5. Place the cap on the CenSlide tube and push down firmly until it clicks and/or its rim is flush with the top of the CenSlide tube. Invert two to three times to evenly mix the specimen with the stain.
6. Refer to Chapter 2, pages 2-3 through 2-5 for instruction on completing the preparation and reading of CenSlide tubes.

3.0.2 Staining Characteristics

Red Blood Cells:	In acid or neutral urine, the red cells often remain intact and colorless or stain slightly purple. In alkaline urine, the red cells are usually lysed and alkaline hematin forms, which stains dark purple.
White Blood Cells:	The nuclei of ordinary leukocytes usually stain a dark orange-purple, and the granularity of the cytoplasm is distinguishable. There is variability between light and dark forms.
Glitter Cells:	These are large polymorphonuclear leukocytes, frequently seen in pyelonephritis, that appear pale blue to almost colorless. The larger than dark-staining cells. Cytoplasmic granules with or without Brownian movement may be noted.
Renal Epithelial Cells:	The nucleus stains dark purple with small rim of orange-purple cytoplasm.

Bladder Epithelial Cells:	Round cells with a blue nucleus and a large encircling border of pale blue cytoplasm.
Squamous Vaginal / Urethral Cells:	These are ragged and irregularly shaped cells with orange-to-purple nuclei and extensive blue or purple cytoplasm.
Hyaline Casts:	Hyaline casts appear pink to light purple with uniform matrices.
RBC Casts:	They appear pale pink with unstained or pale lavender red blood cells enmeshed within their matrix.
Hemoglobin Casts:	They are deep purple and coarsely granular with mixtures of hemoglobin, red blood cells and fibrin.
WBC Casts:	They appear pale pink with purple to orange white blood cells enmeshed within their hyaline matrix. With “glitter cell” casts, the cells are pale blue with a granular cytoplasm surrounded by the pink hyaline matrix.
Renal Epithelial Casts:	They appear pale pink with small cells with purple nuclei enmeshed within their hyaline matrix.
Bacterial Casts:	They appear pale pink with visible purple stained bacteria enmeshed within their hyaline matrix.

Granular casts:	They appear pale pink with granules staining light purple (fine granular) or dark purple (coarse granular) enmeshed within their hyaline matrix.
Fatty Casts:	They appear pale pink with highly refractile unstained globules within their hyaline matrix.
Trichomonas Vaginalis:	A dark purple nucleus with a large encircling border of light purple matrix.
Budding Yeast:	Stain a light to medium purple.
Mucous:	Stain a light to medium purple.
Bacteria:	Stain purple.
Mycelia Spores - Fungi:	Stain purple.

3.1 Confirmatory Protein Assay

Note: Do not perform a sulfosalicylic acid test until after the standard CenSlide microscopic analysis has been completed.

1. Take the CenSlide tube used in performing the microscopic analysis and place it in a standard centrifuge.
2. Centrifuge the CenSlide tube at 400 xg for five minutes.

3.1 Confirmatory Protein Assay (cont.)

3. After centrifugation, remove the CenSlide tube from the centrifuge and decant the supernatant into a clean, clear tube. Be very careful when decanting the supernatant not to disturb the sediment at the bottom of the CenSlide tube.
4. Add an equal volume of sulfosalicylic acid (Exton's Reagent) to the decanted supernatant and mix.
5. Grade for cloudiness.

3.2 Differentiating Red from White Blood Cells

One of the most common methods of differentiating red blood cells from white blood cells is by the addition of a few drops of 2% acetic acid. The acetic acid will lyse only the red blood cells leaving the white blood cells intact.

Red blood cells are effectively lysed in the CenSlide tube with the addition of 6 drops of 2% acetic acid. However, because acetic acid is a weak acid, basic urine specimens may require a greater number of drops of 2% acetic acid in order to lyse the red blood cells.

To lyse red blood cells using 2% acetic acid:

1. Process the CenSlide tube as you normally would (see Sections 2.5 thru 2.7).
2. After the microscopic analysis has been performed, uncup the CenSlide tube and decant the supernatant.
3. Add 6 drops of 2% acetic acid to the CenSlide tube.

4. Mix the acetic acid into the CenSlide tube's viewing area by bending it five times, hand flicking it five times, and then bending it five more times.
5. Place the CenSlide tube in the StakRak™ horizontally and allow the urine sediment to settle for two minutes prior to microscopic examination.

Note: Bending and hand flicking the viewing area causes an increase in the number of cellular elements in the viewing area. Due to this increase, quantitative analysis will not be valid as cellular element levels will be falsely elevated.

3.3 Microscope Objectives

3.3.1 Background

Examination of urine is normally done with a 10x objective for an overview evaluation, followed by closer examination with a 40x objective.

Over the years, it has become standard to use a 1.0 mm thick microscope slide, with a glass coverslip of 0.17 mm thickness for the examination of urine under the microscope. The optics in the objectives are ground to exacting tolerances which take into account the refractive index of glass, which determines how much light rays are bent by a specific thickness.

With the advent of procedures such as tissue culture, where the containers are usually of plastic and may be thicker than a glass coverslip, it was found that the optics had to be modified so they were able to focus through the increased thickness and also deal with the refractive index problem of the various plastics being used. These special objectives were more costly and did not find their way into the world of "routine" microscopes.

3.3.2 Non American Optical (Non-AO) Microscopes

After 1979, the Deutsche Industrial Norm (DIN Standard) was accepted by most microscope manufacturers. This standardization of objective lengths solves the problem of the focusing distance when DIN Standard High Resolution Long Working Distance objectives are used.

Microscopes equipped with 40x DIN Standard objectives may hit the CenSlide tube's viewing area when it is rotated from the 10x objective to the 40x objective. StatSpin inventories a replacement 40x high resolution long working distance objective that produces excellent images at 40x without interference. It can be used with all DIN Standard microscopes. Use StatSpin product number 2C-4950-001, Microscope Objective, 40x, Long, to order this objective.

3.3.3 American Optical (AO) Microscopes

American Optical microscopes equipped with a 40x "infinity corrected" objective do not have enough working distance to focus on urine microscopic elements without hitting the CenSlide tube's viewing area.

StatSpin inventories a replacement 40x high quality, flat field, long working distance objective that produces excellent images with all American Optical "infinity corrected" microscopes. Use StatSpin product number 2C-4940-001, Microscope Objective, 40x, Short, to order this objective.

If an American Optical microscope's 40x objective is "Not Parfocal" with the 10x objective, it requires the operator to refocus excessively between the 10x and the 40x objective. To eliminate this, StatSpin supplies with each American Optical "infinity corrected" replacement objective, a set of "shims" (washers of different thickness) that can be installed between the 40x objective and the turret to eliminate "non-parfocal" situations. Exact combinations of these shims provide the ability to "fine-tune" the parfocal situation.

On an unmodified American Optical model 110 series microscope, all shims will be required. For a modified American Optical model 110 series microscope, it may be necessary to remove some of the shims. Remove the shims, one at a time, starting with the thinnest, until it is possible to go back and forth between the 10x and 40x with minimal amount of refocusing. Contact StatSpin Technical Service if assistance is required.

3.3.4 Microscopes Manufactured Prior to 1979

Microscopes manufactured prior to 1979 have objectives that conformed to no standard. Contact StatSpin Technical Service for assistance with these non-standardized microscopes.

3.4 References

1. Sternheimer, R., and Malbin, B., Clinical Recognition of Pyelonephritis with a New Strain for Urinary Sediment, American Journal of Medicine, 1:312, 1951.
2. Freeman, J.A., and Beeler, M.F., Laboratory Medicine/Urinalysis and Medical Microscopy, 2nd Edition, Lea & Febiger, Philadelphia, 1983.
3. Tipper, P. L., MS, MT (ASCP), Yang, G., MS, MT (ASCP), Nichols, L. MT (ASC), and Settineri, R., MS, Comparison of CenSlide and Standard Methodology for Microscopic Urinalysis, Diagnostic & Clinical Testings, Vol. 28, No. 2, pages 38-39, 1990.
4. NCCLS Document GP16-T, Routine Urinalysis and Collection, Transportation, and Preservation of Urine Specimens, Tentative Guideline, December 1992.

This chapter explains how to take care of your CenSlide tubes and CenSlide 2000 Centrifuge. If you have any questions on how to use your CenSlide Urinalysis System, simply call the StatSpin Hotline at: 800-782-8774. A StatSpin representative will gladly answer your questions, or talk you through any procedures.

4.0 Cleaning the Censlide 2000 Centrifuge

For Urine Spills	Clean up urine spills inside the CenSlide Centrifuge bowl with a cloth dampened with 5% bleach.
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For Grease, Makeup, Fingerprints or Stains	Clean the centrifuge with a damp cloth and mild detergent.
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Note: The bowl interior has not been designed to be fluid tight, therefore, disinfecting solutions should not be poured into the bowl.

4.1 Cleaning the Censlide Tubes

Wipe the viewing area surface lightly with clean gauze or lens cleaning paper. Do not use disinfecting alcohol or water to clean the viewing area surface, as these can cause water spots on the surface.

Note: Be careful not to rub too strongly on the viewing area surface, as this can scratch the viewing area.

4.2 CenSlide 2000 Centrifuge Calibration

The CenSlide 2000 Centrifuge uses microprocessor technology to monitor the speed (rpm) and timing to ensure the accuracy of each test. No initial rpm calibration is required. The rpm can be independently checked with a photoelectric tachometer available from many sources.

To check the rpm:

1. Insert six (6) water-filled CenSlide tubes into the rotor.
2. Position the tachometer beam so it shines through the sight hole located at the top of the centrifuge cover.
3. Turn the tachometer on.
4. Press the start button, wait 15 seconds and record the rpm.

5.0 Trouble Shooting

OBSERVATIONS	ACTIONS
The CenSlide 2000 Centrifuge does not appear to have power.	<p>Check that the power transformer is securely plugged into both the AC wall outlet and the back of the centrifuge.</p> <p>Try a different AC outlet to verify that AC current is being supplied to the power supply module.</p> <p>Make sure the lid is securely closed and locked in place.</p> <p>Reset the CenSlide 2000 Centrifuge by disconnecting and reconnecting the power supply cord's plug to the centrifuge.</p>
The CenSlide 2000 Centrifuge appears to vibrate when operating.	<p>Balance appropriately by placing equally filled CenSlide tubes opposite each other.</p>
It does not appear that the flicking mechanism is functioning.	<p>Seat CenSlide tubes firmly and securely within the CenSlide 2000 Centrifuge rotor.</p> <p>Check that you are using the correct power supply module. Use only the power supply provided with the instrument.</p> <p>Clean and dry the flicker button with alcohol and a tissue or swab.</p>

5.0 Trouble Shooting

OBSERVATIONS	ACTIONS
Sediment appears to pack along the sides of the viewing area.	<p>Seat CenSlide tubes firmly and securely within the CenSlide 2000 Centrifuge rotor.</p> <p>If the specimen is extremely thick or turbid, dilute the sample with saline.</p>
CenSlide tubes leak.	<p>Verify that the caps are firmly and securely in place on the CenSlide tubes.</p> <p>The CenSlide tubes are not made for multiple use. Use a non-liquid filler to match the weight of 5 mL of fluid when using as a balance tube.</p>
The lid latch is stuck in the closed position.	<p>If the "OPEN / ABORT" button does not release the lid after the cycle end alert, disconnect the power cord at the back of the unit and then reconnect it to do a "RESET". Retry the "OPEN / ABORT" button.</p> <p>Place the bottom end of a Cen-Slide tube into the slot in the lid latch and press against the latch.</p> <p>Carefully clean and dry the latch assembly.</p> <p>If the lid O-ring is causing the lid to stick, clean it and the underside of the lid with mild soap and water.</p>

5.0 Trouble Shooting

OBSERVATIONS	ACTIONS
The lid to the centrifuge is open but the green light is not flashing.	Disconnect the power cord at the back of the unit and then reconnect it. This will cause a power "RESET".
The yellow light will not go on when the start button is pressed.	Check that there is power to the centrifuge by observing the green light. Check that the lid is securely latched.
Microscopic observation and focus difficulty.	Make sure the CenSlide tubes have at least a one minute settling time in the horizontal position after centrifugation. Assure that the CenSlide tubes are properly placed in the CenSlide Holder. Using the 10x Objective, focus the microscope on the top or bottom of the CenSlide tube surface and then slowly adjust up or down until you find the observation plane. Then switch to your 40x objective. If it comes in contact with the CenSlide tube, you will need to obtain a long working distance objective through your local distributor or directly through StatSpin.

If you have any questions, or require customer assistance, please call 1-800-782-8774 from 8:00 am to 6:00 pm EST.

6.0 StatSpin CenSlide Urinalysis System Warranty

StatSpin warrants the CenSlide 2000 Centrifuge and CenSlide tubes to be free from defects in material and workmanship for one year. During the first year, StatSpin will repair or replace your CenSlide 2000 Centrifuge at no charge if it fails to perform as specified.

If the instrument has been modified without StatSpin's consent or if the failure is the result of misuse or abuse, StatSpin has no obligation to repair or replace the failed centrifuge.

6.1 StatSpin Maintenance Agreement

After the first year, a StatSpin Maintenance Agreement can be purchased to extend warranty coverage an additional year. Under this agreement, StatSpin will replace your centrifuge with a refurbished centrifuge at no charge, if it fails to perform as specified. If the StatSpin Maintenance Agreement is not purchased, your centrifuge can be repaired or replaced at a fee to be determined at time of the repair or replacement.

6.2 Technical Assistance

For technical assistance, call StatSpin at 1-800-782-8774.

Visit our home page on the internet at...

<http://www.statspin.com>

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