QwikCheck™ *Gold* PIG User Guide

Catalog # Fpe-A-00340-00

Version 1.00

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Section 1: Overview

The QwikCheck™*Gold* PIG sperm quality analyzer tests and reports the FRESH and EXTENDED PIG semen parameters listed below:
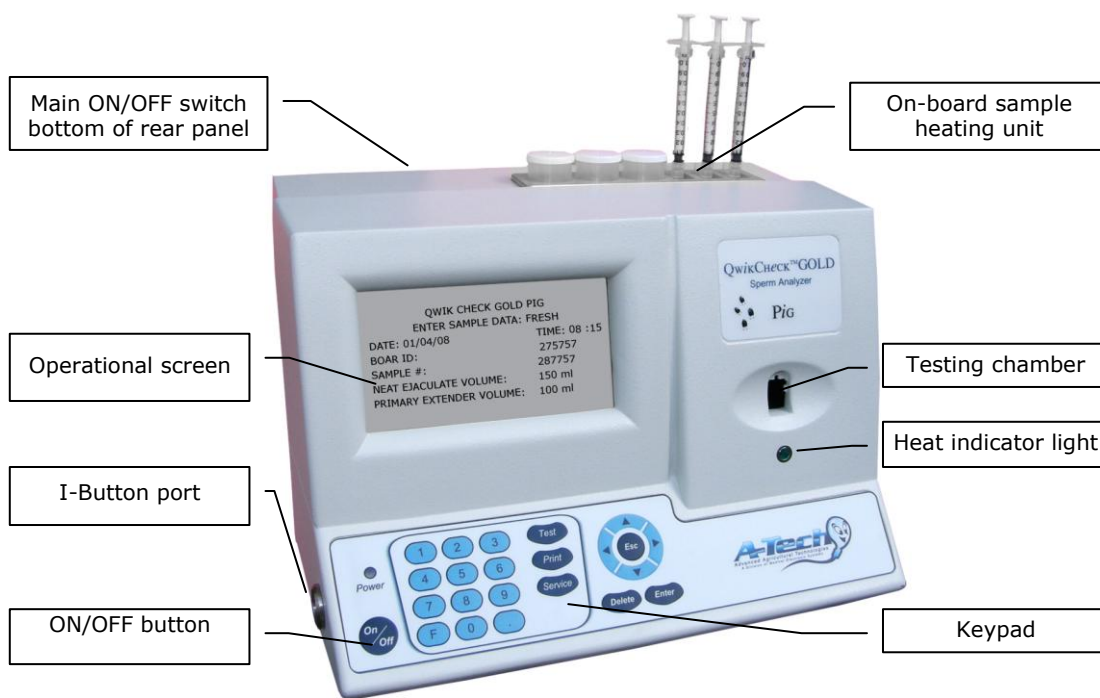
Reported Semen Parameters	
Total Sperm Concentration	Millions/milliliter
Motility	%
Motility Grading	# 1-4
Motile Sperm Concentration	Millions/milliliter
# Sperm	Billions per Semen Volume
# Motile Sperm	Billions per Semen Volume

The QwikCheck™*Gold* provides:
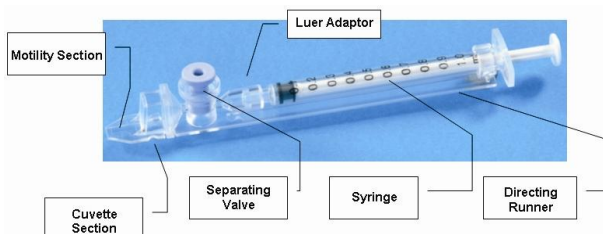- Fully automated, accurate and precise test results in less than one minute.
- Test results printed on a label printer or transferred to a computer archive.

Section 2: System Overview

QwikCheck™ *Gold* with sample heating unit

Testing Capillary

- Plastic, multi-use (animal use only), disposable.
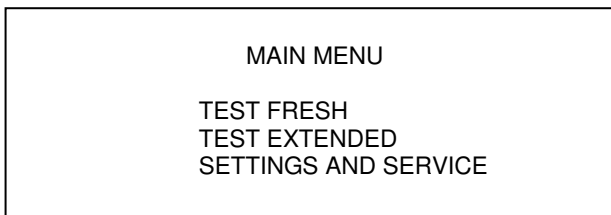- Refer to the appendix section for filling, washing and drying instructions.

Section 3: Operating the QwikCheck™*Gold* Pig

- Turn on the main switch on the rear panel of the QwikCheck™*Gold*.
- The power and 37^0C heating indicator on the front panel will illuminate.
- Press the On/Off key on the keypad.
- The system will now automatically perform system stabilization, auto-calibration and self-testing followed by **# Tests Remaining** message.
- Press the **ENTER** key to view the **MAIN MENU.**

Three options are available from the **MAIN MENU**:

```
                    MAIN MENU

               TEST FRESH
               TEST EXTENDED
               SETTINGS AND SERVICE
```
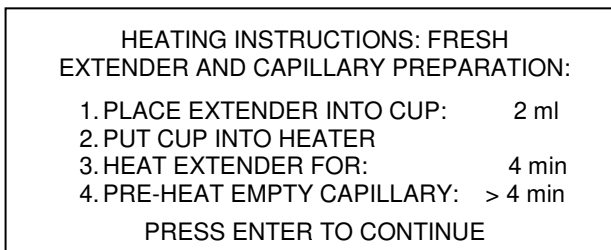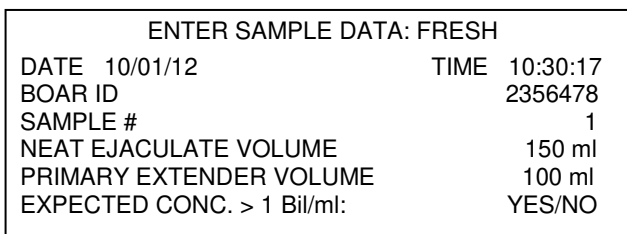
Section 4: Sample Testing

- To begin sample testing, select either TEST FRESH or TEST EXTENDED depending on the type of sample for testing.

Test Fresh Samples

- Select **TEST FRESH** from the **MAIN MENU.** The screen below will display instructions for how to heat the extender and testing capillary:

FRESH SAMPLE TESTING

```
          HEATING INSTRUCTIONS: FRESH
       EXTENDER AND CAPILLARY PREPARATION:

       1. PLACE EXTENDER INTO CUP:      2 ml
       2. PUT CUP INTO HEATER
       3. HEAT EXTENDER FOR:            4 min
       4. PRE-HEAT EMPTY CAPILLARY:   > 4 min

             PRESS ENTER TO CONTINUE
```

NOTE: When preparing samples for testing the extender volume is always two milliliters.

- 2ml of extender takes 4 minutes to heat to 37^0C (98.6^0F) in the on-board heating unit. Close the cup caps to prevent evaporation.
- Heat the testing capillaries to 37^0C (98.6^0F) BEFORE FILLING.
- DO NOT HEAT THE FRESH SEMEN! DO NOT HEAT THE CAPILLARY AFTER FILLING WITH SAMPLE - or motility will be impacted

NOTE: **DO NOT pre-heat** the **FRESH** sample! Only pre-heat the extender and testing capillaries or motility will be impacted and throughput will be slow!

- Press: **ENTER** to view the **ENTER SAMPLE DATA: FRESH** screen

```
          ENTER SAMPLE DATA: FRESH
   DATE  10/01/12           TIME  10:30:17
   BOAR ID                       2356478
   SAMPLE #                            1
   NEAT EJACULATE VOLUME          150 ml
   PRIMARY EXTENDER VOLUME        100 ml
   EXPECTED CONC. > 1 Bil/ml:     YES/NO
```

Enter the following data into the **ENTER SAMPLE DATA: FRESH** screen:

- **Boar ID**: up to 10 digits
- **Sample #**: up to 10 digits
- **Neat Ejaculate Volume** (Semen volume only): up to 3 digits
- **Primary Extender Volume** (Amount of extender used for primary semen dilution before testing): up to 3 digits
- **Expected Conc. > 1Bil/ml:** Select YES if the boar is known to have highly concentrated semen and to avoid a two-step dilution process.

- The screen below will be displayed after the final entry in the ENTER SAMPLE DATA: FRESH screen.
- Prepare the sample for testing based on the screen instructions.
- DO NOT touch the system or insert a testing capillary until instructed.

> FRESH SAMPLE PREPARATION
> 1. MIX SEMEN THOROUGHLY
> 2. ADD SEMEN TO EXTENDER: 200 µl
> 3. MIX SEMEN, FILL AND WIPE CAPILLARY
> 4. WAIT FOR THE BEEP TO BEGIN TESTING
> AUTOCALIBRATION – DO NOT TOUCH UNIT

- The QwikCheck™*Gold* will sound a 'beep' and a message will appear to **INSERT CAPILLARY** when the system is ready to test the sample.

> FRESH SAMPLE PREPARATION
> 1. MIX SEMEN THOROUGHLY
> 2. ADD SEMEN TO EXTENDER: 200 µl
> 3. MIX SEMEN, FILL AND WIPE CAPILLARY
> 4. WAIT FOR THE BEEP TO BEGIN TESTING
> INSERT CAPILLARY INTO TESTING CHAMBER

- Insert the capillary and testing will begin automatically.
- The QwikCheck™*Gold* will sound a "beep" when the testing has finished and the test results will be displayed.
- Press PRINT to print the results onto a label.

> SEMEN ANALYSIS REPORT: FRESH SAMPLE
>
> | | | | |
> |---|---|---|---|
> | DATE | 10/01/12 | CONC | 200.6 M/ml |
> | TIME | 10:30:17 | MOTILITY | 74.8% |
> | BOAR ID: | 2356478 | MOTILITY GRADING | 4 |
> | SAMPLE # | 1 | MSC | 150.1M/ml |
> | NEAT EJAC VOL | 150 ml | # SPERM | 30.1 Bil |
> | PRIM EXT VOL | 100 ml | # MOTILE | 22.5 Bil |

EXTENDED SAMPLE TESTING

Test Extended Samples

- Select **TEST EXTENDED** from the **MAIN MENU** and the screen below will display instructions for heating the extended sample and the testing capillary:

> HEATING INSTRUCTIONS: EXTENDED
> SEMEN AND CAPILLARY PREPARATION
>
> 1. PLACE SEMEN INTO CUP: 2 ml
> 2. PUT CUP INTO HEATER
> 3. HEAT SEMEN FOR: 4 min
> 4. PRE-HEAT EMPTY CAPILLARY: > 4 min
>
> PRESS ENTER TO CONTINUE

- 2ml of semen takes 4 minutes to heat to 37^0C (98.6^0F) in the on-board heating unit. Close the cup caps to prevent evaporation.
- Heat the testing capillaries to 37^0C (98.6^0F) BEFORE FILLING.
- DO NOT HEAT THE CAPILLARY AFTER FILLING WITH SAMPLE - or motility will be impacted.
- Press: **ENTER** to view the **ENTER SAMPLE DATA: EXTENDED** screen

```
            ENTER SAMPLE DATA: EXTENDED

DATE    01/02/ 12              TIME  10:30:25
BOAR ID                             2356478
BATCH  #                              12345
PREPARATION DATE                   26/01/12
SEMEN VOLUME                        100 ml
```

Enter the following data into the **ENTER SAMPLE DATA: EXTENDED** screen:

- **Boar ID**: up to 10 digits
- **Batch #**: up to 10 digits
- **Preparation Date**: the date when the AI dose was prepared
- **Semen Volume** (the actual dose volume): up to 3 digits
- The screen below will be displayed after the final entry in the ENTER SAMPLE DATA: EXTENDED screen.
- Prepare the sample for testing based on the screen instructions.
- DO NOT touch the system or insert a testing capillary until instructed.

```
            EXTENDED SAMPLE PREPARATION:

        1. MIX SEMEN THOROUGHLY
        2. FILL A TESTING CAPILLARY
        3. WIPE THE CAPILLARY
        4. WAIT FOR THE BEEP TO BEGIN TESTING

        AUTOCALIBRATION – DO NOT TOUCH UNIT
```

- The QwikCheck™ *Gold* will sound a 'beep' and a message will appear to **INSERT CAPILLARY** when the system is ready to test the sample.

```
            EXTENDED SAMPLE PREPARATION:

        1. MIX SEMEN THOROUGHLY
        2. FILL A TESTING CAPILLARY
        3. WIPE THE CAPILLARY
        4. WAIT FOR THE BEEP TO BEGIN TESTING

        INSERT CAPILLARY INTO TESTING CHAMBER
```
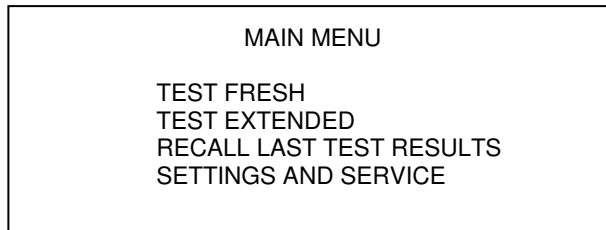
- Insert the capillary and testing will begin automatically.
- The QwikCheck™ *Gold* will sound a "beep" when the testing has finished and the test results will be displayed.
- Press PRINT to print the results onto a label.

```
        SEMEN ANALYSIS REPORT: EXTENDED SAMPLE
DATE          10/01/12  │ CONC              25.3 M/ml
TIME          10:30:17  │ MOTILITY            79.8%
BOAR ID:      2356478   │ MOTILITY GRADING        4
BATCH #         12345   │ MSC             20.2 M/ml
PREP DATE    26/01/12   │ # SPERM           2.5 Bil
SEMEN VOL     100 ml    │ # MOTILE          2.0 Bil
```

Main Menu

After testing a sample the following MAIN MENU screen will be displayed:

```
                MAIN MENU


        TEST FRESH
        TEST EXTENDED
        RECALL LAST TEST RESULTS
        SETTINGS AND SERVICE
```

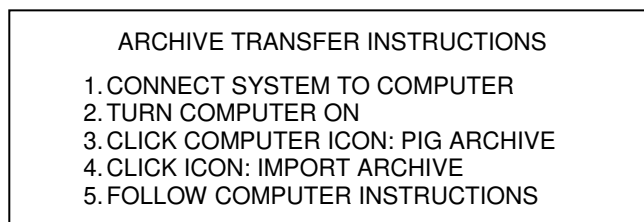An additional option appears in this post-testing Main Menu screen:

- RECALL LAST TEST RESULTS: The results can be recalled for displaying on the operational screen.

Section 5: Settings and Service

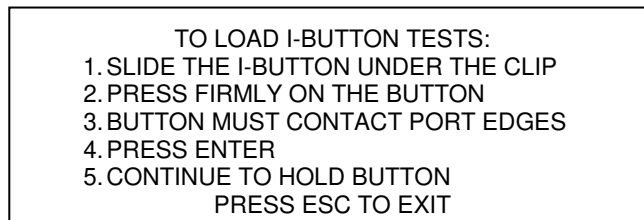Select the **SETTINGS AND SERVICE MENU** to access one of 5 functions:

- **TRANSFER ARCHIVE**
- **ADD I-BUTTON TESTS**
- **DEFAULT SETTINGS**
- **SERVICE SCREENS**
- **SERVICE PERSONNEL**

TRANSFER ARCHIVE: Select this option to transfer the system archive to the PC Excel file. Activating this function will open the following screen:

```
        ARCHIVE TRANSFER INSTRUCTIONS

        1. CONNECT SYSTEM TO COMPUTER
        2. TURN COMPUTER ON
        3. CLICK COMPUTER ICON: PIG ARCHIVE
        4. CLICK ICON: IMPORT ARCHIVE
        5. FOLLOW COMPUTER INSTRUCTIONS
```

Follow the screen instructions and the entire archive will be transferred to the PC (must install the PIG ARCHIVE software on a PC and connect the PC to the QwikCheck GOLD – see APPENDIX V for instructions).

ADD I-BUTTON TESTS: To load I-Button tests select this function from the **Settings and Service** menu and press ENTER. The screen below will be displayed:

NOTE: If the I-Button is not properly inserted a message: **I-BUTTON NOT LOADED** will be displayed. Remove the button, press ESC and try again.

```
        TO LOAD I-BUTTON TESTS:
        1. SLIDE THE I-BUTTON UNDER THE CLIP
        2. PRESS FIRMLY ON THE BUTTON
        3. BUTTON MUST CONTACT PORT EDGES
        4. PRESS ENTER
        5. CONTINUE TO HOLD BUTTON
                PRESS ESC TO EXIT
```

- Using a new I-Button from the test kit, follow the above instructions. **HOLD the I-Button against the port during the entire process**:

```
                PLEASE WAIT
             I-BUTTON LOADING
```

7

- The screen below will display the number of tests added and the total number of tests remaining:

```
              SUCCESS!!
# TESTS ADDED:                    500
TOTAL # TESTS REMAINING:          510
           PRESS ESC TO EXIT
```

DEFAULT SETTINGS: To set the QwikCheck™*Gold* default settings, select this function from the **Settings and Service** menu and press ENTER to view the screen below:

```
            DEFAULT SETTINGS
LOCAL TIME:          08:15:45  HH:MM:SS  24 h
DATE FORMAT:         MM/DD/YY / DD/MM/YY
DATE SETTING:                  04/01/12
AUTO PRINTING:                 YES/NO
IS EXTENDER TRANSPARENT?       YES/NO
```

Enter the QwikCheck™*Gold* default settings. The highlighted defaults above are the factory settings.

- **LOCAL TIME:** enter local time
- **DATE FORMAT:** Select the format **DD/MM/YY or MM/DD/YY** using the right/left arrows on the keyboard. Press **ENTER** to confirm.
- **DATE SETTING:** enter current date
- **AUTO PRINTING:** Select **YES** to automatically print test results to a label printer (supplied and formatted for the QwikCheck GOLD PIG by ATECH).
- **IS EXTENDER TRANSPARENT?**
  - ○ Select **YES** if the semen extender is transparent (clear).
  - ○ Select **NO** if the extender is not clear. Follow the onscreen instructions:

```
            EXTENDER SETTINGS
             PLEASE WAIT…
```

```
   FILL CAPILLARY WITH EXTENDER
          WIPE CAPILLARY,
   INSERT INTO TESTING CHAMBER

   TESTING WILL BEGIN AUTOMATICALLY
```

- Insert the testing capillary into the QwikCheck™*Gold* measurement compartment. The system will be updated with the new extender test results.

```
            EXTENDER SETTINGS
              COMPLETED
```

SERVICE SCREENS: Select this option to view three service screens:

- **Service Data screen (Communication screen)**: This screen reports QwikCheck™*Gold* service information for technical troubleshooting
- **Self-Test Data screen:** This screen provides system information after Self-Test (Self-Test Data) and after regular testing (Internal Data).
- **Algorithm data screen:** This screen displays algorithm calculations

SERVICE PERSONNEL: This option is for technical services personnel and requires a password to access.

Section 6: Troubleshooting

Stabilization Failed:

> STABILIZATION FAILED
> TURN OFF SWITCH ON REAR PANEL
> THEN RESTART SYSTEM
>
> IF SYSTEM FAILS AGAIN,
> CALL TECHNICAL SUPPORT

Failed Self-Test:

> FAILED SELF-TEST
> TURN OFF SWITCH ON REAR PANEL
> CLEAN TESTING CHAMBER
> THEN RESTART SYSTEM
>
> IF SYSTEM FAILS AGAIN,
> CALL TECHNICAL SUPPORT

1. Remove any testing capillary from the measurement compartment.
2. Remove the QwikCheck™*Gold* from all sources of electronic noise (centrifuge, cell phones, etc.).
3. Clean the measurement compartment per the Appendix section.
4. Reboot the QwikCheck™*Gold* without a testing capillary in the chamber:
   a. Turn system **OFF** then back **ON** at the main switch on the rear panel.
   b. Press the front panel **ON/OFF** key to begin Auto-Calibration/Self-Test
5. Call for technical support if the failure recurs.

Electronic Noise:

> ELECTRONIC NOISE
> TURN OFF SWITCH ON REAR PANEL
> THEN RESTART SYSTEM
>
> IF SYSTEM FAILS AGAIN,
> CALL TECHNICAL SUPPORT

- Follow steps 1-3 above.
- After cleaning:
  - Go to: **MAIN MENU** and re-run the test.
- If this message is displayed again, reboot the QwikCheck™*Gold* :
  - Turn the system **OFF** then **ON** at the main switch on the rear panel.
  - Press the front panel **ON/OFF** key to begin Auto-Calibration and Stabilization.
  - From MAIN menu: re-run the test.
- Call technical support if this message is displayed again.

Testing Capillary left inside the measurement chamber	If the testing capillary has been left in the measurement chamber after testing one sample and prior to testing the next sample this screen will be displayed:

REMOVE CAPILLARY
FOLLOW SCREEN INSTRUCTIONS

Input error

INPUT ERROR
SAMPLE DILUTION OUT OF RANGE

- This message appears when the neat ejaculate and the primary extender volumes have not been entered correctly.

- Go back to the **TEST FRESH** data entry screen **and enter these values correctly**.

Sample highly concentrated

HIGHLY CONCENTRATED: PREPARE NEW SAMPLE

1. PRE-HEAT 2.0 ml EXTENDER   4 MIN
2. PRE-HEAT EMPTY CAPILLARY   >4 MIN
3. ADD SEMEN TO EXTENDER: 200 ul
4. MIX SAMPLE, FILL AND WIPE CAPILLARY

AUTOCALIBRATION–DO NOT TOUCH UNIT

- When the sample is highly concentrated for the system to read accurately the screen above will be displayed.

- Prepare a new sample based on the dilution instructions on the screen.

Test resuls out of range

TEST RESULTS
OUT OF RANGE
PREPARE NEW SAMPLE

RETEST SAMPLE? YES/NO

- The screen above is displayed when the sample has not been prepared accurately. Prepare a new sample and re-test in the QwikCheck™*Gold*.

Appendix I: Semen Sample Preparation

EQUIPMENT REQUIRED:

- Extender
- Dispenser
- 10 ml Plastic Container
- Pipette
- QwikCheck™*Gold* capillary
- On-board heater – (set to 37^{0}C sample heating)

FRESH SEMEN SAMPLES:

NOTE: DO NOT PRE-HEAT the **FRESH** semen sample (pre-heat only the extender and testing capillary) or motility and throughput will be impacted!

1. Put 2 ml of extender into 10 ml sample containers provided with the test kit (Figure 1).

2. Pre-heat the extender to 37^{0}C / 98.6^{0}F for **4 minutes** in the QwikCheck™ *Gold* on-board heater.

3. Place QwikCheck™*Gold* testing capillaries in the heater

4. Warm to 37^{0}C / 98.6^{0}F for at least **4 minutes.**

5. Do not pre-heat the fresh sample!

SAMPLE PREPARATION

1. Mix the entire semen sample thoroughly.
2. Extract exactly the volume of semen specified by the QwikCheck™GOLD on-screen instructions using a pipette (Figure 2).
3. Wipe the tip of the pipette to remove any excess semen.
4. Add the semen from the pipette to the pre-warmed extender in the 10 ml plastic container (Figure 3).
5. Close the plastic container and gently but thoroughly mix the sample for 10-20 seconds (Figure 4).
6. The sample is now ready for testing. Fill a pre-heated QwikCheck™GOLD testing capillary with the semen sample.

EXTENDED SEMEN SAMPLES:

NOTE: **PRE-HEAT** the **EXTENDED** semen sample for **ONLY 4 minutes** – do not heat for more or the sample may agglutinate and motility readings will be impacted!

1. Mix the extended semen in its original package.
2. Transfer exactly 2 ml of sample into a 10 ml plastic container.
3. Pre-heat the sample to 37^{0}C/98.6^{0}F for **4 minutes**
4. Place QwikCheck™GOLD testing capillaries in the heater and pre-warm to 37^{0}C / 98.6^{0}F for at least **4 minutes**
5. Gently and thoroughly mix the sample for 20 to 30 seconds
6. The sample is now ready for testing.
7. Fill a pre-heated QwikCheck™GOLD testing capillary with the semen sample and test immediately.

Figure 1: Dispenser

Figure 2: Aspirate the required sample volume

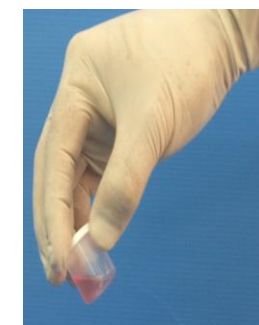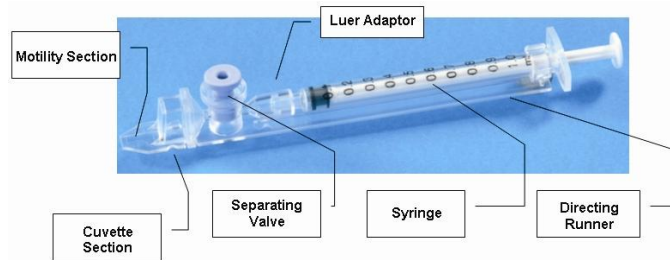**Figure 3: Add semen to the extender**

Figure 4: Thoroughly mix the sample.

Appendix II: Capillary Filling Instructions

1. Push the syringe piston in fully. Place only the thin part of the capillary into the bottom of the diluted sample (Figure 1).

2. Placing two fingers below the piston head pull the piston back slowly while keeping the tip of the capillary well below the sample level and surface bubbles (Figure 1).

3. Continue to aspirate the sample until it appears in syringe – hold in a vertical position and check to see that the sample has completely filled the thin section and the cuvette section and appears in the syringe (Figure 2).

4. Tap on the syringe to make sure there are no air bubbles in the sample.

5. Quickly and thoroughly wipe both the top and bottom of the outer surface of the capillary with a tissue. (Figure 3). Visually confirm that the capillary chambers are still full after wiping - a meniscus will be visible in the thin section of the capillary if sample has been lost due to wiping. If this is seen, push very slightly on the piston to re-fill the thin capillary section.

6. Slowly and carefully push-in the blue valve until it is level with the plastic. The capillary is now ready for testing (Figure 4).

7. Insert the capillary into the QwikCheck™GOLD (Figure 5)

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

12

Appendix III: QwikCheck™ Gold Cleaning Instructions

WHEN TO CLEAN:

- Daily or after every 25 tests
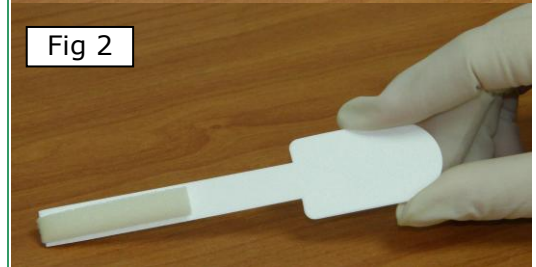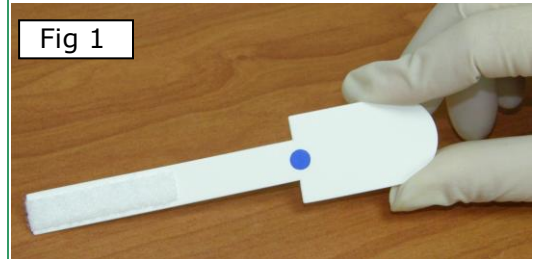- If the system fails SELF TEST

CLEANING: STEP 1

Select a **BLUE DOT** fibrous material capillary (Fig 1).

- Moisten with **ONE** drop of cleaning fluid, shaking off excess fluid.
- Insert into the measurement compartment - fibrous material facing up, and move back and forth a few times.
- Repeat with the fibrous material facing down.
- Select a sponge material capillary (Fig 2) and insert it in the same compartment in order to dry the chamber (Fig 3).

CLEANING: STEP II

Clean the measurement channel using the cleaning brush (Fig 4):

1. Insert the brush (bristle-side down) fully into the upper portion of the lower chamber of the QwikCheck™*Gold* in the same manner as a testing capillary (Fig 5).

2. Pull the brush out of the chamber while sweeping or "dusting off" the LED (you will feel a step or shelf at the back and top of the chamber – this is the top of the LED). (Fig 6)

3. Observe self-test results. The system should now PASS the self-test. If not, repeat the cleaning procedure with the brush (Cleaning Step II - Fig. 4-6).

Fig 1

Fig 2

Fig 3

Fig 4

Fig 5

Fig 6

Appendix IV: Capillary Washing Instructions
(For animal applications ONLY)

Both testing capillaries and 10ml sample collection cups can be washed and re-used up to 5 times by following this EASY procedure:

Testing Capillary

Reposition the blue valve with the jig

Step 1 After running a test:
- Use the white capillary jig to re-position the blue capillary valve
- Expel semen by pumping the plunger a couple of times
- Soak the testing capillary in tap water until ready to wash

Step 2 Set-up: Fill with 1 liter/2 quarts of solution as follows:
- Bowl #1: Tap water (marked "TAP WATER")
- Bowl #2: Distilled water (marked "DISTILLED WATER")
- Bowl #3: Isopropyl Alcohol 70% - 100%

Step 3: Expel all liquid from the testing capillary:
- Pump the syringe plunger a couple of times to expel all remaining liquids.

Step 4: Capillary Washing:
- **Bowl #1 Tap Water:** Completely fill each capillary with tap water. Expel the solution into a hazardous waste container. **Repeat 2 times** then go to Bowl 2.
- **Bowl #2 Distilled Water**: Completely fill each capillary with distilled water. Expel the solution into a hazardous waste container. **Repeat 2 times** then go to Bowl 3.
- **Bowl #3 Isopropyl Alcohol**: Completely fill each capillary with isopropyl alcohol and expel the solution into a hazardous waste container. **Repeat 2 times.**
- Remove the plunger from the syringe after isopropyl washing.

Remove the plunger

Step 5: Drying the Capillaries:
- Place the capillaries on a flat surface and dry overnight. The capillaries can be placed in a low heat oven for a few hours until they are completely dry.

Step 6: Final Preparation/Inspection:
- Replace the plunger into the syringe.
- Inspect the capillary for cracks (throw away) or semen (re-wash).
- Note the number of washings by making a dot on the capillary with a water proof marker after each washing cycle.

Reassemble the capillary

10 ml sample collection cups

Washing – Please refer to Step 4 Capillary Washing and follow the same process for washing in the solutions in bowls #1; #2 and #3. Turn upside down on absorbent paper to dry overnight or place in a low heat oven for a few hours.

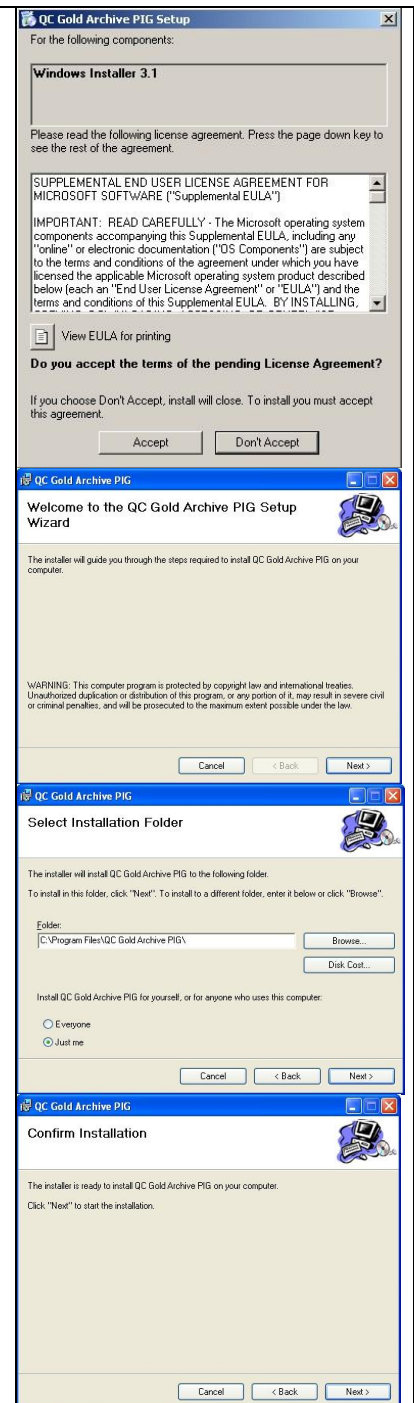# Appendix V: Transfer Test Results to an EXCEL Archive: INSTRUCTIONS

Section 1 : General Description

The QwikCheck™Gold PIG Archive software must be installed to export test/boar data to an EXCEL file or to a PC printer. Follow the directions below to install this software. It will run automatically as long as the PC and QwikCheck GOLD PIG systems are connected and turned on.

REQUIRED HARDWARE	REQUIRED SOFTWARE
▪ 1 GHz or higher CPU ▪ 256 Megabytes of RAM ▪ CD-ROM compatible drive ▪ RS-232 communication port (serial)	▪ Windows XP Service pack 2 or higher ▪ MS Excel 2003 or higher

Section 2 : Software Installation

1. Install the drivers to run the RS232 to USB communication cable following the manufacturer's instructions.

2. Connect the QwikCheck™ GOLD PIG device to a PC USB port using the RS232 to USB cable installed in #1 above. Note the port # of the USB used.

3. Uninstall any QwikCheck™Gold PIG Archive applications that were previously installed on the computer.

4. Close all programs and reboot the computer.

5. Insert the "QwikCheck™Gold PIG Archive" CD into the PC CD-ROM. The program disk will start automatically.

6. If a "Welcome to the QwikCheck™ Gold Archive PIG Setup Wizard" screen is displayed, immediately skip to # 9 below.

7. Click: **ACCEPT** when "Windows Installer 3.1" screen is displayed (not shown here).

8. Click: **ACCEPT** when ".NET Framework 3.5" screen is displayed and the file will be automatically copied (not shown here).

9. Click: **YES** when informed: "Setup must reboot before proceeding". This process may take a few moments (not shown here).

10. Click: **NEXT** when the "Welcome to the QwikCheck™ Gold Archive PIG Setup Wizard" screen is displayed (refer to picture).

11. A new screen: "Select Installation Folder" will be displayed (refer to picture).
    a. Click: **NEXT** to accept the location for where to locate the software, or **BROWSE** to select another location on the computer.
    b. Click: **EVERYONE**
    c. Click: **NEXT** to proceed.

12. Click: **NEXT** when the "Confirm Installation" screen is displayed (refer to picture).

13. When the "Installing QwikCheck™ Gold Archive PIG" screen is displayed (not shown here), the installation is in process.

14. Click: **OK** when the "Warning message" is displayed.

15. Click: **CLOSE** when the "Installation Complete" screen is displayed and then **REBOOT the computer** to complete the installation.

Section 3: Software Activation

The QwikCheck™ Gold PIG Archive operates automatically when the QwikCheck™ GOLD PIG and the PC are on. An icon is visible in the taskbar and can be clicked to maximize the archive application window.

Alternative ways to launch the program are as follows:
- **Click** on the shortcut icon on the desktop
- **Click**:   Start > All Programs > PIG Archive

Icon for Archive

Sample Task Bar

Section 4: Settings

1. Open the PIG Archive application and click on the "Settings" icon (see the icon circled in RED on the screen to the right). The screen below will be displayed:

2. **Click**:
   - **Select Port**: Choose the PC serial port for the "QwikCheck™ Gold PIG".
   - **Printer Name**: Click: **CHOOSE** to select the default printer.
   - **Auto Print**: Mark: "√" to print automatically after each test.
   - **Export to Excel:** Mark: **"√"** to export test results to EXCEL. Then select:
   - **File Name:** Click: **Open** and enter a file name. To name a new file to export to, select a folder location and enter the new file name   the "File Name" row. The file will be created automatically in the folder location selected.
   - **Date Format:** select the date format for exported data.

Section 5: Error Messages

- **Can't Open Port** – Selected COM port is occupied or not installed.

- **Excel File Error–**The EXCEL export file is corrupted or EXCEL is not installed on the PC.

- **"File path" Cannot be accessed. If the file is opened, please close it and press retry –** EXCEL export file is being used by another application or is locked for editing.

   a.   Attempt to close the file and then Click: **RETRY.**

   b.   Click: **CANCEL** and test results will NOT be imported and an "Export Failed" message will appear.

Transfer Test Results to an EXCEL ARCHIVE - INSTALLATION INSTRUCTIONS (continued)

- **Printer Error –** Selected printer cannot be accessed.

- **Please specify export file name –** Excel export file name must be specified before saving the current settings in the "Settings" window.

- **Invalid file path –** file path that was specified in the "Settings" window is not an OS valid path.

- **Settings file is corrupted. Default settings will be used –** settings file has corrupted data. All the settings are returned to defaults and may be changed via "Settings" screen.

- **Settings file is corrupted. Please reload the application –** settings file is corrupted and the current settings cannot be displayed in the "Settings" window. Please reload the software and re-set all of the default settings.

- **Imported data is corrupted.** Please wait for few seconds, and try to import the data manually. – The data was not imported correctly. Please try to import the data manually by choosing "Recall last test results" option in the QwikCheck™ GOLD PIG device, and press the "Print" button on the device. If the error messages pops up again, please reload the QwikCheck™ Gold Archive PIG" application.

Appendix VI: Glossary of Terms		
QwikCheck™ *Gold*		**Definition**
Menu	SN	Serial Number of the QwikCheck™GOLD
	DATE/TIME	The date and time the test was performed
	SAMPLE #	The number assigned to the semen sample
	BOAR ID	The identifying number of the boar being tested
Test Results	CONC	Total sperm concentration expressed in millions/ml
	MSC	Motile sperm concentration expressed in millions/ml
	MOTILITY	Percentage of motile spermatozoa: Motile Sperm Concentration divided by Total Sperm Concentration expressed as a %.
	MOTILITY GRADING	Motility Grading Score: 0-5 is related to progressive motility. A score of "0" represents NO progressive motility and a score of 5 is the maximum level of progressive motility.
	# SPERM	The total number of sperm cells per ejaculate volume (Fresh samples) or per semen volume (Extended samples).
	# MOTILE	The total number of motile sperm cells per ejaculate volume (Fresh samples) or per semen volume (Extended samples).

Appendix VII: QwikCheck™ Gold System Specifications

Dimensions: 20 X 29 X 24cm (HxWxD)

Weight: 4.150 Kg

AC power supply: 100 to 250 VAC, 50/60 Hz, 10 VA

Measurement Compartment

- **Sources of radiant energy** - two 880 nm LEDs for motility and spectrophotometry channels
- **Detector system** – 2 photo detectors - Motility and Optical Density

Display(s)

- Operational backlight LCD (16 lines x 40 characters)

Keypad

- **Operational keys:** ON/OFF, TEST, PRINT, SERVICE, DELETE, ENTER, four cursor buttons, ESC, numeric buttons (0-9)

Front Panel

- LCD operational display
- Measurement compartment
- Multi-button keypad

Rear/Side Panel

- Power connector with fuse-holder (fuse 250V, 2A)
- RS232 cable outlet
- I-Button port (side panel)

Specimen Testing Supplies

- **Measurement capillary:** Disposable, multi-use plastic, positive displacement testing capillary (purchase from manufacturer).
- **I-Button:** Required to run tests (purchase from manufacturer)

Archive Capacity

- NONE – use optional QwikCheck GOLD PIG Archive software (requires PC)

Operating System

- **Control:** Keypad
- **Analysis Time:** 45-75 seconds
- **Software:** Resides on flash memory and drives all man-machine interface functions, runs algorithms for test measurements and operational screens. System can be upgraded from a PC CD-ROM.
- **Sample Testing Temperature:** 37^0C (98.6^0F).
- **Motility channel input signal:** Analog, up to 5V.
- **Spectrophotometer channel input signal:** Modulated (1 kHz) analog, up to 5V.

Quality Control

- **Internal:** Electronic Self-Test and Auto-Calibration.

Operational Temperature and Humidity

- System is operational at 20-31°C.
- *NOTE*: QwikCheck™GOLD operates in a wide range of ambient temperatures however the system is calibrated to measure semen samples at 37^{0}C (98.6^{0}F).
- System is fully operational at up to 80% humidity and 31°C.

Maintenance Schedule

- Cleaning daily and after every 25 tests (refer to User Guide – "Cleaning Instructions").

Manufacturer Recommendations

- Operate the QwikCheck™GOLD away from devices that may cause electronic noise (cell phones) or other devices causing vibrations such as centrifuges.
- Turn system **OFF** at the rear-panel when not in use for extended period of time.
- Semen is considered a biologically hazardous material and is subject to individual laboratory protocols for handling such materials.

Factory Default Settings:

Date format: MM / DD/ YY

Time/Date: Manufacturer's local time/date

Automatic Printing: YES

Is Extender Transparent?: YES