

PAWCORE MANUFACTURING QUALITY CONTROL STANDARDS

Version 2.4 (Updated September 2024)

1. PRODUCT QUALITY CONTROL OVERVIEW

1.1 SmartCollar Device Classification

Product Category: Pet Wearable Electronics

Safety Classification: Class II

Water Resistance Rating: IP67

Operating Temperature Range: -10°C to 45°C

Battery Type: Lithium-Ion 3.7V

1.2 General Testing Requirements

Visual Inspection

Functional Testing

Safety Testing

Durability Testing

Battery Performance Testing

Water Resistance Testing

2. MANUFACTURING QUALITY CONTROL PROCEDURES

2.1 Component Testing

Battery Assembly

Voltage Output Test (3.6V - 3.8V)

Charge Cycle Test (minimum 500 cycles)

Short Circuit Protection Test

Temperature Monitor Test (0°C - 45°C)

Basic Load Test (24-hour duration)

Circuit Board Assembly

Power Draw Test

Signal Strength Test

Component Placement Verification

Solder Joint Inspection

Basic Functionality Test

2.2 Assembly Quality Control

Housing Seal Inspection

Screw Torque Verification

Button Function Test

LED Indicator Test

Basic Water Resistance Check (30-minute submersion)

3. ENVIRONMENTAL TESTING STANDARDS

3.1 Temperature Testing

Cold Test (-10°C for 4 hours)

Heat Test (45°C for 4 hours)

Temperature Cycle Test (5 cycles)

3.2 Water Resistance Testing

Light Rain Simulation (IPX4)

Water Jet Test (IPX5)

Temporary Immersion (IPX7)

Basic Splash Test

3.3 Mechanical Testing

Drop Test (1.5m height)

Vibration Test

Bend Test

Clasp Durability (5000 cycles)

6. QUALITY CONTROL SIGN-OFF

6.1 Required Approvals

Assembly Line Supervisor

Quality Control Inspector

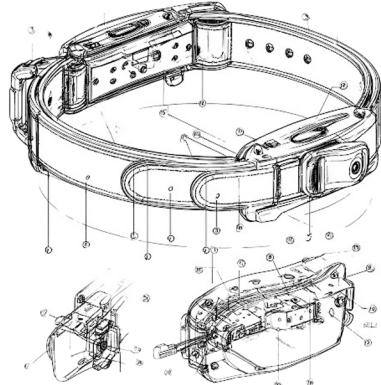
Production Manager

6.2 Documentation Storage

Test Results: 3 years

Batch Records: 5 years

Failure Reports: 3 years



4. QUALITY CONTROL CHECKPOINTS

4.1 Pre-Assembly QC

Component Verification

Material Inspection

Batch Tracking Setup

Tool Calibration Check

4.2 In-Process QC

Assembly Line Inspection Points

Functional Testing Stations

Basic Environmental Checks

Visual Inspection Points

4.3 Final QC

Full Functionality Test

Basic Environmental Test

Packaging Inspection

Documentation Review

5. TEST RESULT DOCUMENTATION

5.1 Required Documentation

Batch Number

Test Date

Operator ID

Test Station ID

Pass/Fail Status

Basic Environmental Conditions

Room Temperature

Humidity (if available)

5.2 Test Result Parameters

Battery Performance

Initial Voltage: 3.7V ±0.1V

Charge Time: < 2 hours

Discharge Test: > 72 hours

Cycle Test: Pass/Fail

Water Resistance

30-minute submersion test

Basic spray test

Seal inspection

7. REVISION HISTORY

Version 2.4 (September 2024)

Updated battery test parameters
Added basic water resistance check
Updated documentation retention policy

Version 2.3 (June 2024)

Added temperature cycle test
Updated assembly line inspection points

Version 2.2 (March 2024)

Added batch tracking requirements
Updated safety classification