



# 2020 PRODUCT CATALOG

# Transforming the World of **Visual Electrophysiology** Since 1976

LKC's products are held to the highest standards of quality and compliance in the design, development, and manufacturing of equipment. LKC has a ISO 13485:2016 certified quality management system, and is an FDA-registered medical device establishment.

LKC's devices are **CE marked** and **FDA cleared**.

All LKC Electrophysiology Systems are RoHS compliant. LKC has country specific medical device approvals where required, including Canada, China, South Korea, Japan, Australia, the EU and Saudi Arabia.





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## HISTORY

LKC was founded in 1975 by Jerome Leight, Sigmund Krassowsky, and Frank Chen; hence, the initials LKC.

In early 1976, LKC Technologies introduced the first commercial visual electrophysiology testing system to the market, establishing itself as the industry leader in the manufacture of visual electrophysiology products.

## ACHIEVEMENTS & FACTS

- Introduced the first automated flash protocol.
- Introduced the concept of near-patient signal digitization with the UTAS's ultra-sensitive signal acquisition amplifier, the UBA-4204 Digital Biomedical Amplifier.
- The UBA was the industry's first fiber optic coupled amplifier that conditioned and digitized the patient's electrical response in a battery-powered unit, producing clear signals by the safest possible means.
- Patented timing methods among color LEDs to generate the most consistent white-light flashes, helping transition away from xenon flash tube technology to the more reliable LED technology.
- Invented the patented Sensor Strip electrode array, which adhere to the skin beneath the eye rather than touching the eye, improves patient safety and convenience.
- Patented real-time pupil size compensation in flash stimuli enables consistent results without the need to artificially dilate the pupil.
- Patented the use of combining data from multiple brightness flicker ERGs and pupillography to help assess retinopathy.
- Introduced the **RETeval** device in 2013, that implements the patented technology above. It is the world's first and only hand-held, battery powered, portable, non-invasive, fully ISCEV-compliant ERG device for use on dilated or non-dilated eyes. The **RETeval** device is also CE Marked and FDA cleared.
- LKC holds six U.S. patents and foreign counterparts for its product line.
- LKC participates in scientific research, publishing papers in peer-reviewed journals.



LKC's trusted technology is **ISCEV-compliant, FDA cleared, and CE marked.**

## RETeval<sup>®</sup> Device complete

### THE ONLY FDA CLEARED NON-MYDRIATIC FLASH & FLICKER ERG/VEP DEVICE

The **RETeval** device is the first completely portable, handheld, full field flash ERG and VEP testing device for medical professionals.

Perfect for pediatric patients and adults alike, the **RETeval** device offers valuable information for aid in diagnosis and monitoring of ophthalmic disorders.

### WHY IS THIS DEVICE SO UNIQUE?

- Integrated age-adjusted reference data.
- User interface available in 14 languages.
- Designed for use with LKC's Sensor Strip electrodes for patient comfort.
- Recalibrates light levels at the beginning of every test to ensure long-term consistency of results.
- Non-mydratic testing by adjusting light levels based on pupil size with real-time pupillography.

### For The Researcher:

- Access to the raw measurements as well as processed data.
- Customize protocols with sinusoidal, square, ramp, and brief-flash stimuli.
- RFF Extractor tool for exporting cursor values, electrical and pupil waveforms and more.

### For The Clinician:

- In-lane testing doesn't require dedicated space in your space constraint facility.
- Immediate results on the device or in PDF report.
- Pediatric testing without sedation.



Simple Electrodiagnostic  
Testing For Animals

## RETevet™ Device

The RETeivet device offers an intuitive interface that allows veterinary ophthalmologists and researchers to perform electroretinograms (ERGs) to measure an animal's retinal function.

The built-in infrared camera allows medical professionals to see the eye in real-time during testing, and the internal photometer offers self calibration before every test – ensuring fast, accurate, and repeatable results.

### For The Clinical Veterinarian:

- Safety and efficacy is assured to keep animals protected.
- The only handheld, portable device making ERG testing simple.
- Intuitive user interface for easy adoption in any practice.
- No need for external filters for dim flashes.
- Real time, professional quality reports to share with pet owners.

### For Animal Researchers:

- FDA cleared quality.
- New RFF Extractor available for exporting bulk data.
- Quick, high volume testing.
- Easy to train research staff.

## UTAS SunBurst™

The UTAS SunBurst™ system offers the world's brightest and most capable ganzfeld.

LKC's SunBurst product line offers the ultimate experience for physicians and patients in a small, lightweight and easy to use system. Conduct full ISCEV complaint electroretinograms (ERGs), visual evoked potential (VEPs), and electro-oculogram (EOGs) tests.



### KEY SPECIFICATIONS

- Flash stimuli from -50 dB to +11 dB in any color.
- Total flash range from -75 dB to +30 dB in 1 dB steps.
- Background luminance 0.005 to 4000 cd/m<sup>2</sup> in any color.
- ISCEV Standard ERG / EOG / VEP.
- Double flash, On/Off, S-Cone, photopic negative response, scotopic threshold response ERGs.

The UTAS Systems have been cited in 435 papers in the past 5 years

- Multifocal ERG – Multifocal VEP utilizing long m-sequences.\*
- Dark adaptometry.\*
- GLP (21CFR11) Compliance Pack, which allows compliance with FDA electronic recordkeeping requirements.\*

\*Optional features



## UTAS with BigShot™



The **UTAS with BigShot™ system** offers researchers the most capable animal ganzfeld on the market. Perform flash ERG (with option to add pattern testing) with ease on any small-to-medium sized animals.

Amplification with LKC's digital biomedical amplifiers allows faithful reproduction of every nuanced recording.

### BigShot Features:

- Large-format ganzfeld ensure consistent illumination for rodents, rabbits, as well as larger animals.
- Flash stimuli from -50 dB to +4 dB in any color.
- Total flash range from -75 dB to +25 dB in 1 dB steps.
- Background luminance 0.005 to 1000 cd/m<sup>2</sup> in any color.
- Custom protocols allow flexibility to create any tests your research demands.

The UTAS Systems have been cited in 435 papers in the past 5 years

- Uses Red (627 nm), Green (530 nm), Blue (470 nm), Amber (590 nm) and white LEDs and Xenon flash.
- Flash luminance range of 100 dB (+25 dB to -75 dB) in 1 dB steps.
- Xenon flash luminance of 2.5 – 800 cd/m<sup>2</sup> (0 dB to +25 dB), and more.
- Optional UV (365 nm) stimulator for species with UV sensitive s-cones.

# ELECTRODES



## LKC Sensor Strip Electrodes

\$700.00 USD

### Non-invasive, Flexible & Reliable

Sold in boxes of 50 pairs these disposable, skin contact, self-adhering electrode arrays are ideal when comfort and convenience are factors.

These require one Sensor strip to DIN cable (91-201).

To test both eyes simultaneously use two DIN cables (91-201), the Vee Cable (91-202) to connect both green connectors to the instrument's common/ground/right leg drive position.

SKU: 95-068



## ERG Electrodes - Box of 50

\$1,375.00 USD

### Reduces Possibility of Nosocomial Eye Infections

Disposable mono-polar contact lens electrode.

- Gold foil electrode on poly(methyl methacrylate) with lead wire.
- Single (adult) size only.

SKU: 95-011

## ERG Jet Electrodes (Individual)

\$28.93 USD



### Reduces nosocomial eye infections

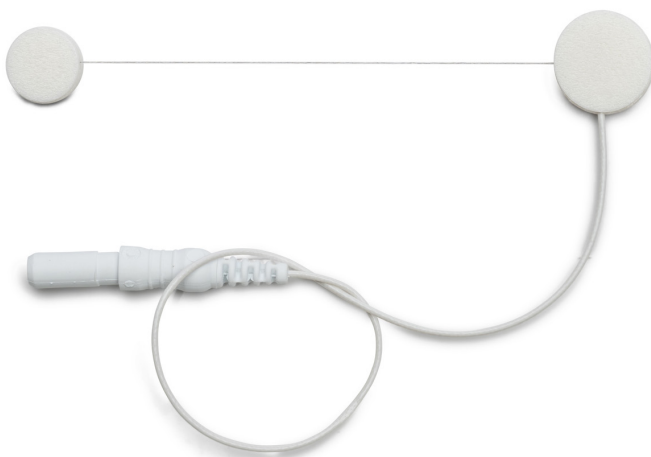
This is a disposable, mono-polar contact lens electrode.

- Gold foil electrode on poly(methyl methacrylate) with lead wire.
- Single (adult) size only.

SKU: 95-082

## DTL Plus Electrodes

\$17.00 USD



### Comfort is Key

- This disposable, mono-polar Silver-Nylon thread electrode with adhesive fasteners is ideal for situations where comfort is a factor.
- This does require an extension cable.

SKU: 95-003

## Sensor Strip to DIN Cable

\$195.00 USD



### Connects Sensor Strips to Non-RETeval devices

Use to connect RETeval Sensor strips (95-068) to your non-RETeval devices.

\*A total of two required + Vee cable (91-202) for testing both eyes at once.

SKU: 91-201

## Vee Cable

\$28.00 USD



### Easily Test Both Eyes At One Time

- This two male to one female splitter allows you to connect to different electrodes and test both eye's of a patient at one time.

SKU: 95-202



## DTL Electrode Extension Cable

\$140.00 USD

### A Reusable Cable

- This extension connects from the DTL Plus Electrodes to Patient Electrode Cable.

SKU: 95-028



## EOG Electrodes

\$39.00 USD

### Reusable Mono-Polar Electrode

- Use with electrode washers and electrode gel. (gold conductor)
- This is only for one electrode.
- For both eyes order two.

SKU: 95-075

## Ear Clip Electrodes

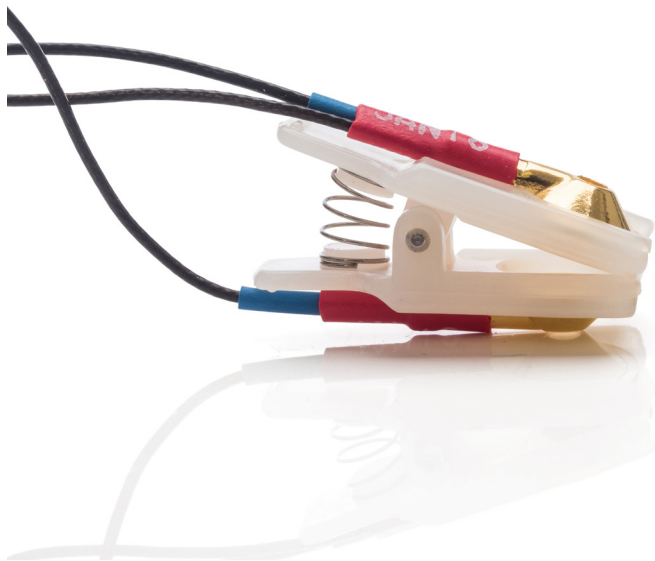
\$64.50 USD

### A Reusable Electrode

Two 10 mm diameter gold-plated cup electrodes in clip assembly.

Recommended Use: Use with electrode gel.

SKU: 95-004



## Gold-Plated Cul, 10 mm Electrodes

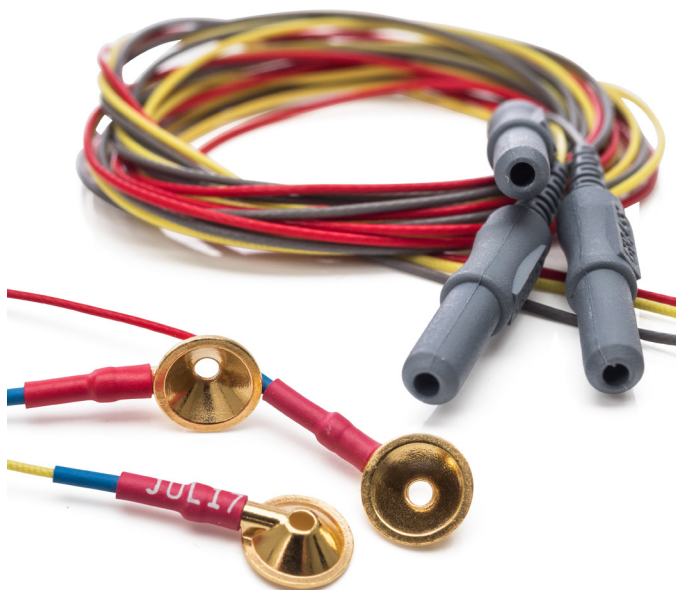
\$23.70 USD

### Available in Size 24" or 48"

Mono-polar, gold-cup scalp electrode with 2 mm center hole for VER/VEP recording.

Recommended Use: Use with electrode cream.

SKU: 95-001 / 95-083



## ECG Disposable Electrodes

\$26.00 USD



### Disposable Silver-Silver Chloride Electrodes

Pre-gelled, self-adhesive electrodes for forehead reference in electroretinogram (ERG) and visual evoked potential (VEP) recordings.

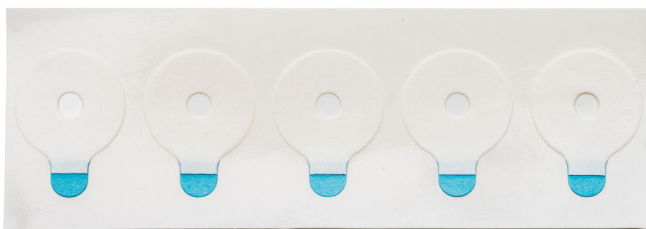
Requires Ground Reference Lead. (Box of 30)

SKU: 95-005

## Electrode Washers

\$22.50 USD

### Attach EOF Active Electrodes to Skin



These washers are sold as a package of 100.

SKU: 95-009



## Ground Reference Lead

\$16.80 USD

Clips directly to ECG Disposable Electrodes

This reusable lead clips to the nub on an ECG disposable electrode and extends to the patient cable.

SKU: 95-014



## Mouse Electrodes

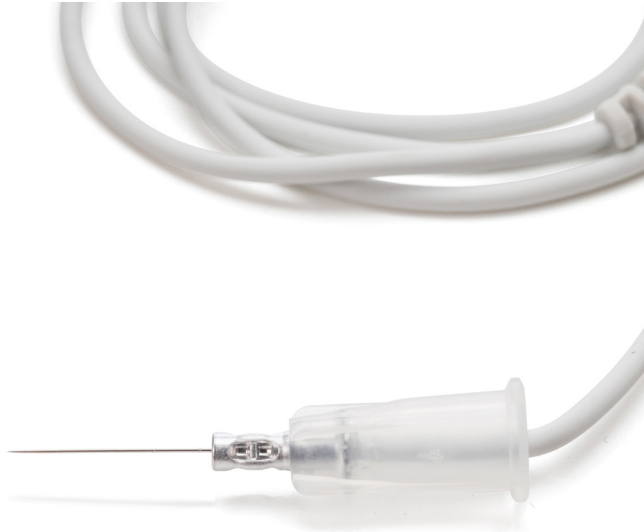
\$840.00USD

One size only available at 3.2 lens diameter and 1.5mm base curve.

Lens is made of Polymethylmethacrylate (acrylic) and metal contact is gold. Connector: 1.5mm Female DIN. Cable Length: 1m. Reusable. Delivery time approximately 6 weeks.

SKU: N30





## Needle Electrodes

\$105.00 USD

12mm (1/2 inch) x 29 gauge needle

Disposable, pre-sterilized electrodes for animal testing.

Sold as a package of 25 electrodes.

SKU: 95-016



## Rat ERG Electrodes

\$795.00 USD

Monopolar Materials: Lens is made of Polymethylmethacrylate (acrylic) and metal contact is gold. Connector: 1.5mm Female DIN. Cable Length: 1m. Reusable. Delivery time approximately 6 weeks.

SKU: Determined by weight of animal.

For detailed information, visit: [www.store.lkc.com/rat-erg-electrodes](http://www.store.lkc.com/rat-erg-electrodes)



## 2-Channel Rodent Manipulator

\$2,280.00 USD

### Available For:

- one channel (Manip1)
- two channel (95-048) recording

SKU: 95-048

## Animal Temperature Controller - ATC2000

\$2,135.00 USD



### Temperature Under Control

- ATC2000 is a low noise heating system for maintaining animal body temperature during experimental procedures.
- The DC heater is extremely quiet in terms of electromagnetic radiation.

SKU: 92-071

## Battery Charger

\$252.47 USD



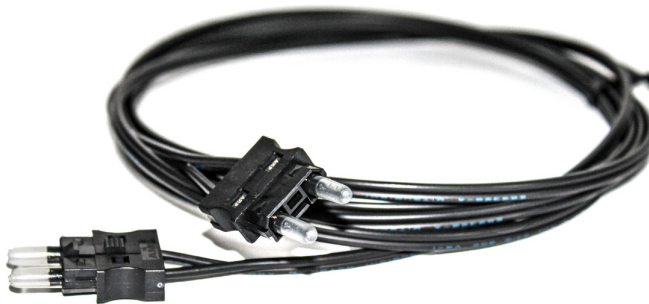
**Don't Let Running Out of Battery Get On Your Way**

Battery charger for the UTAS UBA-4202 device.

SKU: 92-057

## Fiber Optic TOS Link Cable

\$76.55 USD



Transfers data to the UBA-4202, which then converts it to go onto the computer via a USB 1.1 connection.

SKU: 91-173

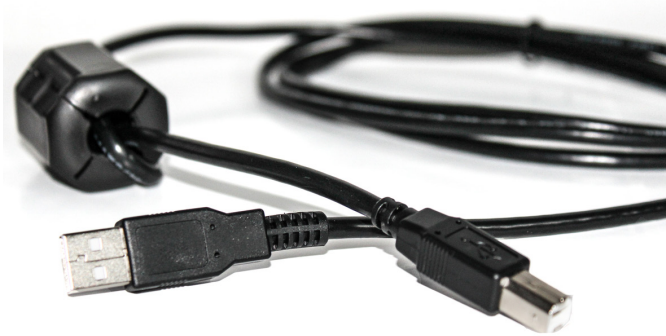
## UBA-4202 USB Cable Assembly

\$19.35 USD

### Replacement USB Cables for the UBA - UTAS System

Cables are subject to damage over time and with this replacement set, nothing will stop you from testing.

SKU: 91-231



## NuPrep Skin Gel

\$33.20 USD

### Reduce Skin Impedance with Sensor Strip Electrodes

Mildly abrasive skin prep gel to reduce skin impedance with sensor strip electrodes.

Sold as a box of 3 (4 oz. each tube).

SKU: 95-079





## Ten20 Electrode Cream

\$14.70 USD

### Electrode Cream

For use with VEP Active Electrodes.

Sold as 4 oz. tube.

SKU: 95-006



## Skin Cleanser

\$17.00 USD

### Sold As A Box of 100 Pads

Alcohol pad with a mild abrasive for cleaning the skin before attaching electrodes.

SKU: 95-017



## Spectra 360 - Electrode Gel

\$12.00 USD

### Electrode GEL

For use with EOG Active and Ear Clip Electrodes.

Sold as 8 oz. tube.

SKU: 95-007



## LKC Flashlight Keychain

\$14.00 USD

### Useful During Dark Adapted Tests

This flashlight allows you to have enough light in the room during a dark adaptation test without light adapting the patient.

By using red lights, the cones can receive enough light to provide photopic vision.

SKU: 92-073

## Dark Room Light Bulb

\$20.90 USD



### Light to the Darkest Space

Incandescent “dim red” bulb allows tester to see without light-adapting patient.

Fits into any standard desk lamp.

Not RoHS compliant.

SKU: 22-052

## Dark Adaptation Preserver

\$62.00 USD

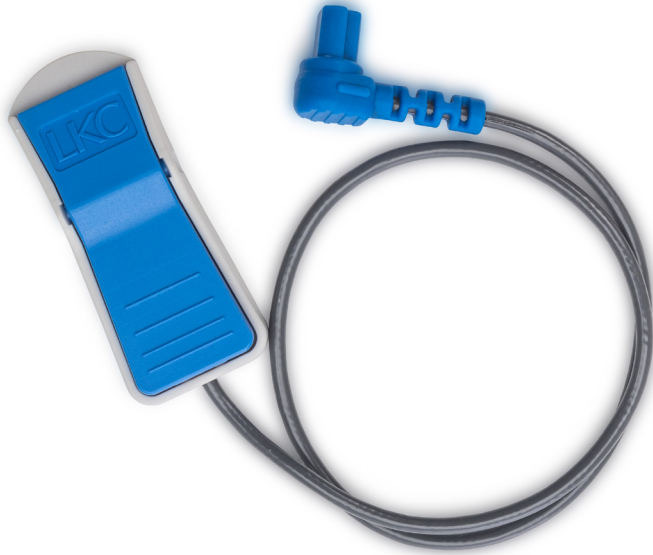


### Red Screen Mask Kit

If you plan to do dark adaptation electroretinography testing, this red screen kit will help in the process.

Keep your patients in dark adaption by having them use this screen preserver. This screen comes with the necessary tools to place over top any size monitor.

SKU: 92-074



## Sensor Strip Lead

\$153.00 USD

### Replacement Kit

This lead connects the LKC Sensor Strip Electrode to the RETeval.

SKU: 91-193



## Carrying Case

\$314.00 USD

### Carry Your Device Between Multiple Testing Locations

Everything needed for up to 50 tests is held in a small, durable case with dedicated cushioned compartments.

The Carrying Case's custom foam cushioning is constructed of special non-shedding foam to help keep the device optics and ganzfeld bowl dust and lint free.

SKU: 29-038





## RETeval Mounting Arm

\$576.00 USD

**Provides A Stable Mount For Measurements, Particularly Handy For Running Longer Protocols**

Simple to adjust to match patient height and position; adjustments accommodate heights from the mounting surface to 24" (610 mm) above.

The Mounting Arm's anodized aluminum and nylon construction is durable and easy to clean.

SKU: 81-298



## RETeval Battery

\$58.50 USD

**Holds Charge for Up to 8 Hours**

The LKC RETeval battery allows you to test approximately 70 patients before recharging depending on the protocols used.

SKU: 81-262



## RETeval Eyecup

\$10.00 USD

### Flexible, Comfortable and Simple

The RETeval eyecup is a soft material that is comfortable for patients of all ages.

After many uses, it may need to be replaced. Luckily this item is easily replaceable and easy to pop on and off.

SKU: 81-266



## RETeval Dust Cover

\$13.00 USD

### Clean and Dust Free RETeval

Use the RETeval dust cover to keep your device safely stored and away from all particles and dust in the lab or office.

SKU: 81-269

## RETeval / RETevet Extended Support

\$495.00 - \$1,495.00USD



**Software Only Support:** After the expiration of your initial 1-year warranty period for the RETeval/RETevet devices, extended phone & email based support, including all software updates is available.

**Hardware + Software Support:** This extended warranty includes phone, email based support, software updates, as well as hardware related issues. related issues.

SKU: SUPP01-02

## RETeval RFF Extractor

\$589.00 USD

### Export Bulk Data From Your RETeval Device

The RFF Extractor can export patient and stimulus information, cursor values, electrical and pupil waveforms, and raw data from multiple binary .rff files generated by the RETeval<sup>®</sup> device into a single CSV file.



SKU: 94-023

A close-up, shallow depth-of-field photograph of a person's hands typing on a silver laptop keyboard. The person is wearing a blue and white checkered shirt. The laptop screen is open and shows a webpage with a light blue background and some text. The background is a blurred office environment with a desk, a plant, and a window. A dark blue banner is overlaid on the right side of the image, containing white text. Below the banner is a light blue horizontal bar containing the website address in dark blue text.

All Electrodes & Supplies  
Available Online

[www.store.lkc.com](http://www.store.lkc.com)

# CONTACT

## USA SALES:

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**Hours:** 8:30 a.m. - 5:00 p.m. EST

## INTERNATIONAL SALES:

Contact your preferred LKC official distributor or email: [sales@lkc.com](mailto:sales@lkc.com) to be referred to the one nearest to your location.

Visit: [www.lkc.com/distributors](http://www.lkc.com/distributors) for a full list of official distributors.

## About LKC Technologies, Inc.

LKC Technologies, Inc. is the leader in visual electrophysiology, with products in over fifty countries. LKC's products are used to help diagnose a large number of ophthalmic conditions and vision threatening diseases and discovery of primary retinal disorders by measuring retinal function using ERG, EOG, VEP, Multifocal testing, dark adaptometry, and more.

For more information, visit: [www.LKC.com](http://www.LKC.com) or contact us at: [info@lkc.com](mailto:info@lkc.com)





# LKC

TECHNOLOGIES

VISION *DEFINED*™





LKC  
TECHNOLOGIES



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Product Prices Subject to Change

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