

Crary Laboratory Instruments and Equipment

Section 1: Items to be removed from inventory (for retro/donation/disposal)

Item: Turner Designs Model 10 (analog) Fluorometer

Mapcon: D0283

NSF Tag: 05874

Serial Number: 5699

Purchase Price: \$6,909

Age: Purchased in 1986

Usage: Issued four times in the past 17 years

Status and Discussion: This instrument sustained some damage to switches and the internal optic assembly during its most recent usage (2009-2010). Due to the age, this model is no longer supported by Turner Designs. There are two newer Turner 10AU digital models in Crary, usually not allocated to 100%. This is not worth repairing and has only seen two uses in the last 5+ years.

John Priscu requests donation

Item: Sony Fieldcam, Pixel TLVDW, underwater time lapse camera system

Mapcon: D9624

NSF Tag: 018166

Serial Number: 921101

Purchase Price: \$15,134

Age: Purchased in 1992

Usage: No use in the last six years. Last use, DeVries in 2004, Kim in 2003.

Status and Discussion: This camera has not been used much, if at all in recent years, and has been issued eight times overall. The camera housing has a cracked latch which would need to be repaired/replaced before use. This is a large system that takes up considerable space in the Crary Laboratory Stockroom.

Item: Perkin Elmer AA Analyst 800 series Graphite Furnace AA

Mapcon: 0077790

NSF Tag: 017230

Serial Number: 7716

Purchase Price: \$48,285

Age: Purchased in 2001

Usage: This is an instrument that has been used by the RPSC Analytical Services Group.

Status and Discussion: This instrument has not been used since 2004. It was in good working order when last used. Due to lack of use, complex nature, and stability of the samples it is designed to analyze, there is no need to keep this instrument in McMurdo.

Item: Agilent 1100 Series HPLC, UV-Vis detector, quant pump, degasser, column heater.

Mapcon: 0097818

NSF Tag: 020333

Serial Number: DE11403882

Purchase Price: \$27,563

Age: Purchased in 2004 for 2004-05 season

Usage: This instrument was purchased for use by the RPSC Analytical Services

Status and Discussion: This instrument has been used once since purchase (A. Marsh, 2004), and has mostly sat idle. Having an HPLC system at McMurdo seems desirable, the low use of this instrument seems to suggest otherwise. Has been requested for use for 2010-11 season by B-046 Foreman.

Walker Smith requests donation

John Priscu requests donation

Item: Lab-Tek Tissue Processor

Mapcon:D0341

NSF Tag:

Serial Number:

Purchase Price: \$3,000

Age: 17+ years

Usage: none

Status and Discussion: This is a large paraffin tissue imbedding/processing system. It has been housed in the Crary Lab Outdoor Storage Area, and has seen no listed usage since 1993.

Item: Martek Instruments Transmissometer

Mapcon: D5730

NSF Tag: 013747

Serial Number: 100029

Purchase Price: \$9,245

Age: Purchased in 1991

Usage: This has been issued four times over the last 17 years.

Status and Discussion: This was last used by Priscu B-195 in 2004, DeVries B-005 in 2000, and again by Priscu and DeVries in 1997. This is a pretty old instrument, factory service is no longer available, but limited technical support is still available.

John Priscu requests donation

Item: Savant Refrigerated SpeedVac Model SC-210A-120/SS-32

Mapcon:D51662

NSF Tag: 02991

Serial Numbers: SC210A-3H350081-1C

Purchase Price: \$8,455

Age: Purchased in 1993

Usage: Unknown

Status and Discussion: This system has been in Crary Lab, and was moved to the outdoor storage area. This piece of equipment has no usage in the last five years, and is in unknown condition. Used for DNA/RNA concentration.

Item: Savant Instruments DNA100 SpeedVac Centrifuge, Vacuum dryer.

Mapcon: D6561

NSF Tag:

Serial Number:

Purchase Price: \$2,335

Age: 17+ years

Usage: Minimal

Status and Discussion: This is one of the larger Savant Speedvac systems. It is one of the shared instrument labs, and has received little use in recent years. Used for DNA/RNA concentration.

Item: Thermo Savant SpeedVac Centrifuge, vacuum dryer system

Mapcon: 0096239

NSF Tag: 020390

Serial Number: O4K470030-2A

Purchase Price: 13,329

Age: Purchased in 2004

Usage: Minimal

Status and Discussion: Used for DNA/RNA concentration. This instrument has received little use over the past five seasons and is in a shared equipment room.

John Priscu requests donation

Item: OI Analytical Multiple Purging Module

Mapcon: D10310

NSF Tag: NSF 03486

Serial Number: 91-352

Purchase Price: \$7,500 estimated

Age: Unknown, 17+ years

Usage: Last use unknown

Status and Discussion: This is an old Multiple purging (Purge & Trap) module for OI Analytical systems. Was used by the Analytical Services group. Unknown last use, believed 8+ years ago.

Item: Sigma 900 Max portable auto sampler system

Mapcon: 0043104

NSF Tag:

Serial Number:

Purchase Price: \$4,608

Age: Purchased in 2000

Usage: Twice

Status and Discussion: The portable auto sampling system has been issued twice, once to RPSC Environmental, and once to McKnight's Stream Team. This is a rather large unit and has sat in the Crary Lab Outdoor Storage Area since 2004.

Item: ASE 200 Solvent Extractor (Dionex)

Mapcon: 0074199

NSF Tag: 016810

Serial Number: 00070233

Purchase Price: \$54,394

Age: Purchased in 2000

Usage: Unknown, none since 2002. Used by RPSC Analytical

Status and Discussion: This instrument was used briefly by RPSC Analytical, and has not been used for some time. Believe this was related to studies by Kennicutt.

Chuck Kennicutt/Stephen Sweet requests donation

Item: Zymark Turbo Vap II Solvent Concentrator

Mapcon: 0057580

NSF Tag: 01914

Serial Number: TV9644N7157

Purchase Price: \$5,250

Age: Purchased in 1996

Usage: Used by RPSC Analytical

Status and Discussion: This is a solvent concentrator that was used by RPSC Analytical for an unknown amount of time. This has not been used since 2002. Last use believed to be related to studies by Kennicutt (related to Solvent Extractor).

Chuck Kennicutt/Stephen Sweet requests donation

Item: R.J. Harbey Biological Oxidizer, model OX500

Mapcon: 0085530

NSF Tag: 019663

Serial Number: 02234A

Purchase Price: \$13,480

Age: Purchased in 2002

Usage: Issued to Virginia in 2002, Moved to Rad Lab for work in 2005

Status and Discussion: This unit has received little use in recent years, and has been residing in the Rad Lab (104) in Crary since 2005. Unknown if used frequently by rad users. Suggest retrograding.

John Priscu requests donation

Item: Coy Lab Products Anaerobic Chamber, Model DMAALC

Mapcon: 0105446

NSF Tag: 021545

Serial Number: AC054257

Purchase Price: \$11,950

Age: Purchased in 2005

Usage: Two uses listed, Priscu '05, and Harwood '07.

Status and Discussion: This chamber is relatively large (36"x32"x40") and is currently sitting in Phase Two of Crary Laboratory. It has seen two uses in its five years of use. Due to large size and little use, recommend removing from inventory. (Requested for use in 2010-11 season by Doran B-208)

Kevin Mandernack requests donation

John Priscu requests donation

Item: Infrared Gas Analyzer, CO₂, by Illinois Instruments

Mapcon: 0109407

NSF Tag: 021678

Serial Number: 375 098906

Purchase Price: 5195

Age: Purchased in 2006

Usage: One use

Status and Discussion: This unit was suggested for purchase by Priscu as a possible replacement for an old IR Gas Analyzer that failed. This unit lacked the sensitivity needed for lower level CO₂ analysis. Qubit Systems S157 was selected over this unit.

Item: Buchler Instruments Chloridometer

Mapcon: D5960

NSF Tag: 02562, 06019

Serial Numbers: B-137030, B137021

Purchase Price: \$3,475

Age: Purchased in 1992/1991

Usage: No use for 5 years.

Status and Discussion: These are old chloridometers (measure chloride in mixed matrix solutions) that haven't been used since 2005 by Petzel. These instruments were used often in the mid/late 1990's, but have only had two uses since 2000.

Item: Illuminova Light Pipette, Model PLD-1

Mapcon: 0054727

NSF Tag: 04298

Serial Number:

Purchase Price: \$19,495

Age: Purchased in 1996

Usage: By Karentz, 7 issuances

Status and Discussion: This is an older system that has primarily been used by Karentz over the last few years. Would like to remove from inventory, possibly donate to Karentz. It also uses a very old computer system.

Item: SLM Instruments French Press, Pressure Cell, Model FA-078

Mapcon: D6539

NSF Tag: 05927

Serial Number: 9108454

Purchase Price: \$9,490

Age: Purchased in 1991

Usage: Once, 2001, Hoffman

Status and Discussion: High pressure cell with one use over 17 years.

Item: Corning Flame Photometer

Mapcon: D0335

NSF Tag: 06278

Serial Number: 1141

Purchase Price: \$6,343

Age: Unknown

Usage: 5 issues in 17 years.

Status and Discussion: Primarily used by Petzel and DeVries, Last used, Petzel in 2005. This is a very old photometer that has seen minimal use. Last use was 5 years ago.

Item: Sutter Instruments P-97 Flaming/Brown micropipette puller.

Mapcon: 0073590

NSF Tag: 016751

Serial Number: 10976

Purchase Price: \$6,700

Age: Purchased in 2000

Usage: Used twice by BO-030 in 2000, 2002

Status and Discussion: This is a machine that makes heats and pulls glass to make precision micropipettes. This has not been used for about eight years.

Section 2: Items to be removed from inventory and possibly replaced

RPSC has no current plans for replacement of the following

Suggestions for replacement models are welcome.

Item: Perkin Elmer LS-50B Luminescence Spectrophotometer (x2)

Mapcon: D9129

NSF Tag(s): 03216, 04280

Serial Numbers: 37110, 32091

Purchase Price: \$19,307 (each)

Age: 1994, 1998

Usage: Very little use over the last five years.

Status and Discussion: These instruments are in a shared equipment room in Crary Laboratory. The LS-50B instruments are obsolete per Perkin Elmer. Both of these instruments started displaying significant electronic problems during the 2009-2010 season. Currently these are not reliable and will not be made available for use. Recommended Replacement is the Perkin Elmer LS-55 series (with wellplate reader \$34,000).

Chuck Kennicutt/Stephen Sweet requests donation

Item: Hydrolab Surveyor 4 system (199-99)

Mapcon: 0064038

NSF Tag: 014421

Serial Number: 34875

Purchase Price: \$6,430

Age: Purchased in 1998

Usage: Frequent

Status and Discussion: This instrument has had several of the sensors fail. It is no longer serviceable from factory. A similar unit (Hach/Hydrolab Quanta system) will cost around \$6,000-\$7,000 for the same options. B-046-M Foreman has requested use of this instrument and suggested a Manta 2 system (\$9,000) by Eureka Environmental.

Item: Hydrolab H2O-BT CTD/Multiprobe

Mapcon: 0053997

NSF Tag:

Serial Number:

Purchase Price: \$4,900

Age: Purchased in 1995

Usage: Frequent

Status and Discussion: This instrument is similar, and older than, to the Surveyor 4 system. It has also had several of the sensors fail and is no longer serviceable from factory. A similar unit (Hach/Hydrolab Quanta system) will cost around \$6,000-\$7,000 for the same options.

Item: Furno FE-881 Echosounder Mk-II

Mapcon: D5479

NSF Tag: 05943, 05974

Serial Number: 8882-3309, 8882-2884

Purchase Price: \$3,371

Age: 17 plus years

Usage: Issued 6 times over 17 years

Status and Discussion: These are large, rather old paper print out style echo sounders. These have had minor use, and are generally not well liked due to their age, size, and weight. Last uses Davis '09, Kim '08, Harwood '05, DeVries '01. Would be interested in a smaller, more portable option as a replacement.

We suggest replacement with an inexpensive, sturdy, easy to use system. There is a need for such a device, but the current system is too clumsy/difficult.

Item: Interocean Systems S4 Current Meters (5x?)

Mapcon: D2689

NSF Tag: 01105, 018979, 023713, 05831, 05834, 02858

Serial Numbers: 05451197, 08291863, 05451199, 05451402, 05451403

Purchase Price: \$18,000 - \$25,000 each

Age: Purchased in 1988-1992

Usage: Frequently requested with mixed outcomes

Status and Discussion: These are relatively old, difficult to use current meters. They have the potential to work well, but suffer frequent failures of memory, battery systems, and do not connect well to computers lacking true serial ports. Repairs and calibrations are costly. Replacing these units with a newer current metering system would be ideal. Suggestions of replacement style/brand would be best suited to cover the McMurdo area uses are welcome.

Vernon Asper requests donation

We strongly suggest replacement with newer S4 units. The current units are requested often, but rarely work.

Item: Wild/Gofzz/Leica Tachymat Theomat TC-1010 survey instrument

Mapcon: D51946

NSF Tag: 018982

Serial Number: 369795

Purchase Price: \$18,552

Age: Purchased in 1993

Usage: Frequent, annual use.

Status and Discussion: Last used by McKnight '09, Sletten '08, McKnight '08. This is an older aging system that requires knowledge and skills of how the system works. This unit is 17+ years old and data transfer equipment is much older technology and some groups have had issues using it, requiring McMurdo Surveyor to perform the work needed. Suggest removing from Cray Inventory or possibly upgrading to a newer instrument. (Requested for use by B-421 McKnight for 2010-11 season.)