

PACKING CHECKLIST

(minimum quantities for 3 technicians to process 100 animals)

| ITEM | AMT | ITEM | AMT |
|--------------------------------|--------|----------------------------------|-------|
| SET-UP | | Alcohol burner | 1 |
| Sherman traps | 300 | 100% Ethanol | 1 pt |
| Tomahawk traps | 60 | Squeeze bottle | 1 |
| Surveyor's flagging | 3 rls | 70% Ethanol or Isopropyl alcohol | 1 pt |
| Bait | 4 lbs | Trap tally forms | 5 |
| Cotton balls (in cold weather) | 300 | Habitat assessment forms | 12 |
| Sack or shoulder bag for traps | 3 | Clipboard | 1 |
| | | LN2 or cooler & dry ice | 1 |
| COLLECTION/PROCESSING | | 1-cc syringes with needles | 100 |
| Pencils | 3 | 3-cc syringes | 50 |
| Plastic collection bags | 200 | 22 g, 1.5 inch needles | 50 |
| Heavy rubber gloves | 7 prs | Heparin | 1 btl |
| Tape, white labeling | 3 rls | Large (12") forceps | 1 |
| Sharpies or pens | 3 | Foot tags | 100 |
| Respirators/goggles or PAPRs | 3 | Pen with indelible ink | 2 |
| Surgeon's gowns | 9 | 10% Formalin | 2 gal |
| Latex surgeon's gloves | 1 box | Wide-mouth carboys, 1 gallon | 2 |
| Shoe covers | 9 prs | Freezer boxes for samples | 10 |
| Tent or tarp | 1 | | |
| Folding table | 1 | CLEANUP | |
| Chairs or stools | 3 | Buckets, 5 gallon | 3 |
| Zip-lock bags (12" x 12") | 25 | Long-handle brush (for traps) | 1 |
| Labels: Blood | 100 | Scrub brush (for instruments) | 1 |
| Spleen | 100 | Large carboys (for water) | 2 |
| Kidney | 100 | Hand soap | 1 |
| Liver | 100 | Large trash bags | 10 |
| Lung | 100 | Biohazard bags | 10 |
| Other | 100 | Autoclave tape | 1 |
| Metofane | 2 btls | | |
| Ketamine:Xylazine | 1 btl | MISCELLANEOUS | |
| Gauze squares | 200 | First aid kit | 1 |
| Pesola scales, 100 g & 1000 g | 1 ea | Trunks for equipment | 4 |
| Rulers, millimeter | 2 | Insect repellent | 1 |
| Paper towels | 300 | Drinking water | |
| Capillary tubes | 200 | Flashlight | 2 |
| Sharps container | 1 | Small zip-lock bags (8" x 8") | 25 |
| Dissecting scissors | 50 | Mammal guide | 1 |
| Forceps | 50 | Computer | 1 |
| Tray for Lysol/instruments | 2 | Tape measure | 1 |
| Cryovials (2 ml) | 600 | Maps | |
| Cryovial racks | 5 | Magnifying lens | 1 |
| Lysol | 1 gal | Matches or lighter | 2 |
| Spray bottle | 1 | | |
| | | | |

The following is an example of a hazardous materials transportation document completed in accordance with the Department of Transportation Hazardous Materials Shipping Regulations, Part 172.

HAZARDOUS MATERIALS TRANSPORTATION DOCUMENTATION

| <u>Proper shipping name</u> | <u>Hazard Class</u> | <u>UN Number</u> | <u>Quantity</u> |
|-----------------------------|---------------------|------------------|-----------------|
| Formaldehyde, solutions | 9 | UN2209 | 4 gallons |
| Chloroform | 6.1 | UN1888 | 1 gallon |

From:
Centers for Disease Control and Prevention
NCID/DVRD/SPB
MS/G14
1600 Clifton Road
Atlanta, GA 30333

To:
Museum of Southwestern Biology
University of New Mexico
Albuquerque, NM 87131

HABITAT ASSESSMENT DATA SHEET

State: _____ Loc: _____ Community type: _____ Date: _____

Latitude: _____ Longitude: _____ Elevation: _____ meters

Weather (Circle one): sunny partly-sunny cloudy rainy High Temperature _____ °F

| | | | |
|-------------------------------|--------------------|-----------------------|-------------------------|
| Trapline No(s): _____ | | Habitat: _____ | |
| Category | Cover Class | Average Height | Dominant Species |
| Overstory | 1 2 3 4 5 | _____ m | _____ |
| Understory | 1 2 3 4 5 | _____ m | _____ |
| Herbaceous | 1 2 3 4 5 | _____ cm | _____ |
| Litter | 1 2 3 4 5 | _____ cm | _____ |
| Bare soil/rock | 1 2 3 4 5 | | |
| Average slope _____ (degrees) | | | |
| NOTES: _____ | | | |
| _____ | | | |
| _____ | | | |

| | | | |
|-------------------------------|--------------------|-----------------------|-------------------------|
| Trapline No(s): _____ | | Habitat: _____ | |
| Category | Cover Class | Average Height | Dominant Species |
| Overstory | 1 2 3 4 5 | _____ m | _____ |
| Understory | 1 2 3 4 5 | _____ m | _____ |
| Herbaceous | 1 2 3 4 5 | _____ cm | _____ |
| Litter | 1 2 3 4 5 | _____ cm | _____ |
| Bare soil/rock | 1 2 3 4 5 | | |
| Average slope _____ (degrees) | | | |
| NOTES: _____ | | | |
| _____ | | | |
| _____ | | | |

| | | | |
|-------------------------------|--------------------|-----------------------|-------------------------|
| Trapline No(s): _____ | | Habitat: _____ | |
| Category | Cover Class | Average Height | Dominant Species |
| Overstory | 1 2 3 4 5 | _____ m | _____ |
| Understory | 1 2 3 4 5 | _____ m | _____ |
| Herbaceous | 1 2 3 4 5 | _____ cm | _____ |
| Litter | 1 2 3 4 5 | _____ cm | _____ |
| Bare soil/rock | 1 2 3 4 5 | | |
| Average slope _____ (degrees) | | | |
| NOTES: _____ | | | |
| _____ | | | |
| _____ | | | |

Cover classes: 1= <15%; 2=15-40%; 3=41-65%; 4=66-90%; 5= >90%

Page ___ of ___

PROCESSING SET-UP CHECKLIST

1. Mix 5% Lysol[®] for trap decontamination (1 quart to about 4 1/2 gallons of water in a 5-gallon plastic bucket).
2. Fill plastic spray bottle and plastic tray (for instruments) with 5% Lysol[®].
3. Label one set of cryovials (1 each for blood, spleen, kidney, liver, lung, etc.) for each captured animal and place vials in racks.
4. Set up processing table:
 - trash bag (for noncontaminated trash)
 - autoclave bag (for contaminated disposables)
 - anesthesia bag (12" x 12" zip-lock bag with anesthesia-moistened gauze)
 - Pesola[®] scales (or electronic balance)
 - ruler
 - capillary tubes (for retroorbital bleeding)
 - needles/syringes (if cardiac bleeding is anticipated)
 - sharps container
 - scissors and forceps (at least one pair for each animal if available)
 - paper towels
 - alcohol burner with 100% ethanol
 - squeeze bottle of 70% ethanol (or alcohol wipes)
 - gauze squares
 - tool for cervical dislocation (e.g., plastic marking pen)
 - foot tags
 - pen with permanent ink for tags
 - 10% formalin in large-mouth container with tight-sealing lid
 - heavy rubber gloves (for handling/cleaning traps)
 - long-handle brush for traps
 - scrub brush for instruments
 - Personal protective equipment (respirators, goggles, gowns, shoe covers, latex gloves)

NECROPSY DATA SHEET — EXPLANATION OF TERMS

ACC# = accession number

Line = trap line number (to relate to appendix 4)

Sp = genus and species (abbreviation)

Sex = (M or F)

Mass = weight to nearest gram

Total L = total length (body plus tail)

Tail = length of tail

Ear = length of ear

RHF = length of right hind foot

Testicles:

S/A = scrotal or abdominal

Len = length (nearest mm)

Wid = width (nearest mm)

Epid C/N = Epididymis coiled or not

Vag P/C = Vagina perforate or closed

Nipples:

E/S = enlarged or small

L/N = lactating or not

Embryos:

No. = number of embryos

Len = crown to rump length

Ut Scr = uterine scars (may be recorded as present or absent or number of scars entered)

Wound = presence or absence of scars or wounds (description and location of scars may be placed in comments or on reverse)

Samples taken = check appropriate boxes (blood, spleen, kidney, liver, lung, other1, other2)

Comments = anything unusual or worthy of note

SPECIALTY EQUIPMENT FOR RODENT CAPTURE AND PROCESSING

| Item and source | Catalog No. |
|--|------------------------------|
| <ul style="list-style-type: none">Aluminum, heavy duty, folding, live trap, 3x3.5x9 in. <p>H.B. Sherman Trap Company P.O. Box 20267 Tallahassee, FL 32316 904 562-5566</p> | LFA-AD |
| <ul style="list-style-type: none">Folding wire-mesh live trap, 16x5x5 in. <p>Tomahawk Live Trap Company P.O. Box 323 Tomahawk, WI 54487 715 453-3550 (orders only) 800 272-8720</p> | 201 |
| <ul style="list-style-type: none">Cryogenic vialCryosure cryogenic vial rack <p>Evergreen Scientific 2300 East 49th St PO Box 58248 Los Angeles, CA 90058-0248 800 421-6261</p> | 222-3902-085 240-3919-Y80 |
| <ul style="list-style-type: none">Freezer boxes, 81-place zylar resin storage box <p>USA/Scientific Plastics P.O. Box 3536 Ocala FL 34478 800 522-8477</p> | 2381-5300 |
| <ul style="list-style-type: none">Metofane <p>Pittman-Moore 421 Holly St Mundelein, IL 60060 800 525-9480</p> | 55685 |
| <ul style="list-style-type: none">KetamineRompun (Xylazine--20; 20 mg/ml) <p>The Butler Company 6145-J Northbelt Parkway Norcross, GA 30071 404 441-2323</p> | AVC50425 WAB10945 |

- Professional bulk lysol disinfectant 2500-000

National Laboratories
 Division of Lehn and Fink
 225 Summit Avenue
 Montvale, NJ 07645-1575
 800 677-9218

- Pesola scale, with clip attachment, 100g x 1g 93537
- Pesola scale, with clip attachment, 1kg x 10g 93540

Forestry Suppliers, Inc.
 PO Box 8397
 Jackson, MS 39284-8397
 800 647-5368

- Half-mask respirator, silicone WS-11291
- HEPA filter cartridge, package of 4 WS-11299
- Splash goggles, non-vented WS-11568

Lab Safety Supply Inc.
 PO Box 1268
 Janesville, WI 53547-1368
 800 356-0783

- Racal equipment and accessories:
 - Air-mate HEPA 10 (new, complete system) 231-01-19
 - OR:
 - Turbo unit and filter packs 520-02-02
 - Breathe-Easy 12 Tyvex Head Cover, Large, w/ extra long hose 520-03-07
 (3 per pack, specify size)
 - Battery 520-01-17
 - Filter media, Type P3 HEPA, (packs of 6) 450-00-01R12

RACAL Health and Safety Inc.
 Attn: Jim Elliott
 7305 Executive Way
 Frederick, MD 21701-8368
 800 682-9500

- Nobuto filter paper strips, 100/box 800700

Microfiltration Systems
 6800 Sierra Court
 Dublin, CA 94568
 510 828-6010

- Styrofoam coolers with cardboard shipping boxes — various sizes available from:

Polyfoam Packers Corporation
 2320 Foster Ave.
 Wheeling, IL 60090-6572
 800 323-7442

- Adhesive labels for cryovials (single-sheet, for laser printer or ink jet), 40 mm x 20 mm, 70 per sheet; Specify sales order # 48641, “70-up” labels

Avery Dennison
Label Divisions North America
Information Systems
685 Howard St.
P.O. Box 550
Buffalo, NY 14206
800 283-7904 ext. 353 (Attn: Tony Dimillo)

- Adhesive labels for cryovials (pinfeed, for dot matrix printer), 1 1/16 x 1 11/16 inch. Specify “labels with superstick removable adhesive,” Stock number BDP-CHC-30

Shamrock Scientific Specialty Systems, Inc.
34 Davis Dr.
Bellwood, IL 60104
800 323-0249

- Several software packages are available for designing label formats to be printed on the above labels using laser, ink jet, or dot matrix printers. We use “Bear Rock Labeler” from:

Bear Rock Technologies Corp.
4140 Mother Load Dr., Suite 100
Shingle Springs, CA 95682-8038
800 232-7625

- Heparin, 1000 units, 10 ml bottle 005371

AJ Buck
11407 Cronhill Dr.
Owings Mills, MD 21117
800 638-8672

Most other items called for in this manual are locally available or can be ordered from any laboratory supplier. Capillary tubes used for eye bleeding are widely available. The only requisite is that they be heparinized. Two suppliers we deal with are:

Baxter Healthcare
Scientific Products Division
525 W. 21st Street
Tempe, AZ 85282
800 545-6777

Fisher Scientific
800 622-6048 (call for local address)

PACKING INSTRUCTION 650

General Requirements

Shippers of biological products and diagnostic specimens where a relatively low probability exists that infectious substances are present (diagnostic specimens being transported to undergo routine screening tests or for the purpose of initial diagnosis may be considered to fall under this category) must comply with these Regulations. The shipper must also ensure that shipments are prepared in such a manner that they arrive at their destination in good condition and that they present no hazard to persons or animals during shipment. The packaging must include:

650(a) inner packagings comprising:

- *a leak-proof primary receptacle(s)* -- for biological products the maximum quantity must not exceed 50 mL and for diagnostic specimens the maximum quantity must not exceed 100 mL;
- *a watertight secondary packaging* -- the maximum quantity per outer packaging for biological products must not exceed 50 mL when fragile primary receptacles are used, or 100 mL when other than fragile primary receptacles are used. The maximum quantity per outer packaging for diagnostic specimens must not exceed 500 mL;
- *an absorbent material* -- must be placed between the primary receptacle and the secondary packaging.

If multiple primary receptacles are placed in a single secondary packaging, they must be wrapped individually to ensure that contact between them is prevented.

The absorbing material, for example cotton wool, must be sufficient to absorb the entire contents of all primary receptacles.

650(b) an outer packaging of adequate strength for its capacity, weight, and intended use.

The completed package must be capable of withstanding at least a 1.2 metre drop test on a hard unyielding surface without release of its contents.

The primary receptacle or the secondary packaging used for biological products and diagnostic specimens must be capable of withstanding, without leakage, an internal pressure which produces a pressure differential of not less than 95 kPa (0.95 bar, 13.8 lb/in²) in the range of - 40 °C to + 55 °C (- 40 °F to 130 °F).

Packages consigned as freight must be at least 100 mm (4 in) in the smallest overall external dimension.

An itemized list of contents must be enclosed between the secondary packaging and the outer packaging.

Each package and the “Nature and Quantity of Goods” box of the air waybill must show the text “BIOLOGICAL PRODUCTS” or “DIAGNOSTIC SPECIMENS” (as applicable) “— NOT RESTRICTED, PACKED IN COMPLIANCE WITH IATA PACKING INSTRUCTION 650”.

A Shipper’s Declaration for Dangerous Goods is not required.

Specific Requirements

Although exceptional cases, (e.g., the shipment of whole organs) may require special packaging, the great majority of biological products and diagnostic specimens can and must be packaged according to the following guidelines.

Substances shipped at ambient temperatures or higher: Primary receptacles include those of glass, metal, or plastic. Positive means of ensuring a leak-proof seal, such as heat seal, skirted stopper or metal crimp seal must be provided. If screw caps are used, these must be reinforced with adhesive tape.

Substances shipped refrigerated or frozen (wet ice, prefrozen packs, dry ice): Ice or dry ice must be placed outside the secondary packaging(s). Interior support must be provided to secure the secondary packaging(s) in the original position after the ice or dry ice has been dissipated. If ice is used the packaging must be leakproof. If dry ice is used, the outer packaging must permit the release of carbon-dioxide gas. The primary receptacle must maintain its containment integrity at the temperature of the refrigerant as well as at the temperatures and pressure of air transport to which the receptacle could be subjected if refrigeration were to be lost.

Substances shipped in liquid nitrogen: Plastic capable of withstanding very low temperatures must be used instead of glass receptacles. Secondary packaging must also withstand very low temperatures and in most cases will need to be fitted over individual primary receptacles. Requirements for shipment of liquid nitrogen must also be observed. The primary receptacle must maintain its containment integrity at the temperature of the refrigerant used as well as at the temperatures and pressure of air transport to which the receptacle could be subjected if refrigeration were to be lost.

Lyophilized substances: Primary receptacles must be either flamed-sealed glass ampoules or *rubber-stoppered glass* vials with metal seals.

