

SECTION 12346
LABORATORY CASEWORK

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Scope: Furnish and install laboratory casework and accessories specified under this section and located in the laboratory as indicated on the drawings
- B. Additional Requirements Specified Elsewhere
 - 1. Section 01340: Shop Drawings, Product Data, and Samples
 - 2. Section 01600: Materials and Equipment
 - 3. Section 01730: Operating and Maintenance Data
- C. Related Requirements Specified Elsewhere
 - 1. Section 06100: Carpentry
 - 2. Section 15400: Plumbing
 - 3. Division 16: Electrical

1.2 SUBMITTALS

- A. Shop Drawings
 - 1. Submit shop drawings for all laboratory casework
 - 2. Immediately after award of Contract, provide separate rough-in drawings indicating exact locations of mechanical and electrical rough-in penetrations through the floor or walls
 - 3. Review electrical and mechanical rough-in shown on Contract Drawings
- B. Product Data
 - 1. Submit catalog cuts on all sinks, trim, and accessories
- C. Operating and Maintenance Data
 - 1. Submit parts lists, operating instructions, and maintenance recommendations as required by Section 01730 - Operating and Maintenance Data
- D. Samples
 - 1. Submit complete set of samples for Engineer's color selection

E. Sample Cabinet

1. Approved manufacturers may be required to submit a sample cabinet for review and approval
2. This sample cabinet will be retained by the Engineer for comparison purposes until installation of the prefabricated cabinet work has been started on the project, at which time the sample cabinet will be returned to the manufacture

F. In accordance with Section 01340

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Protect casework and equipment from damage during delivery, storage, installation, and subsequent building operations
- B. Cabinets shall not be delivered until the building or storage area is enclosed and sufficiently dry to prevent damage from changes in moisture content

1.4 JOB CONDITIONS

- A. Sequencing, Scheduling
 1. Casework installation must interface closely with equipment installation
 2. Coordinate and schedule work to assure that casework is installed in an expeditious manner, fit properly together, and tightly fits in the space provided

PART 2 - PRODUCTS

2.1 DESIGN BASIS

- A. Laboratory Casework and Accessories
 1. Thermo Fisher Scientific, Inc.
 2. Or equivalent
 3. Equivalent products of other manufacturers may be accepted subject to compliance with design, function, materials, and performance of the specified items

2.2 LABORATORY CASEWORK

- A. Casework shown on the drawings shall be Thermo Fisher Scientific flush overlay steel cabinets or equivalent
 1. Stock numbers shown on the drawings are Thermo Fisher Scientific numbers
- B. Provide all standard hardware and all other hardware or accessories indicated on the drawings
- C. Cabinet construction shall be steel

- D. Adjustable shelves in base cabinets must be supported on steel clips or similar supports fit into holes drilled in sides of cabinet
- E. Nickel plated K-V standards are acceptable for adjustable shelves in wall and tall units only
- F. Provide all necessary fillers and removable backs for access to pipe chases
- G. Finish will be selected by Owner from manufacturer's standards
- H. Provide master-keyed locks where indicated

2.3 TOPS

- A. Type C-1: 1" thick molded epoxy resin with integral molded back and end splashes
 - 1. Design basis
 - a. Thermo Fisher Scientific
 - b. Kewaunee Kemresin
 - c. Taylor Tayresin (could not find info on)
 - d. Restop (could not find info on)
 - e. Durcon
 - f. Or equivalent
 - g. Equivalent products of other manufacturers may be accepted subject to compliance with design, function, materials, and performance of the specified items

2.4 SINKS

A. General

- 1. Install all sinks, sink supports, and tail pieces located in laboratory casework
- 2. Traps, vents, and drain lines from trap to rough-in shall be provided and installed

B. Sink Types

- 1. Cup Sinks
 - a. Thermo Fisher Scientific black epoxy resin, Type EP CS12 (3" x 9") or equivalent
- 2. Epoxy Resin
 - a. Thermo Fisher Scientific "EP-20"
 - b. Kewaunee "1021 Kemresin", Durcon black epoxy resin, or equivalent
 - c. Types and sizes as indicated on the drawings

C. Sink Supports

- 1. Provide steel sink supports for epoxy resin sinks

D. Sink Fittings

1. Cup Sinks: Standard Thermo Scientific tail piece
2. Epoxy Resin: 1½" (or other size as required) Thermo Scientific Threaded sink outlet into sink bottom, stopper, overflow and tail piece
3. Dilution traps: Enfield Model No. W601
4. Chemical waste neutralization tank: Enfield Model No. EZ0005

2.5 SERVICE FIXTURES

A. Mechanical

1. Water fixtures and fittings located in wood laboratory casework
2. Isolation valves, connection material, and connections between fixtures and rough-in

B. Electrical

1. Electrical fixtures located in steel laboratory casework and wiremold
2. Conduit and wiring from junction box to service fixture

2.6 ACCESSORY EQUIPMENT

- A. All accessory equipment such as glassware pegboards, utility shelves, apparatus rods, and accessories which are indicated on the drawings

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify location of all mechanical and electrical rough-ins to assure proper match with installed equipment
- B. Report any unsatisfactory equipment installation

3.2 PREPARATION

A. Field Measurements

1. Verify all measurements of the building before beginning final fabrication
2. All casework must conform to building lines and other casework and must be nearly fitted around openings, pipes, or obstructions

3.3 INSTALLATION

- A. Deliver, uncrate, place in proper location, and assemble all casework and equipment covered by this section
- B. Set casework accurately in place, level, scribe, and secure to floor and walls

- C. Provide connecting and attaching devices, closures, and trim members as required
- D. Install items complete and adjust moving parts to operate smoothly
- E. Joints between sections of tops shall occur only over joints between base cabinet units below *(not true in one location over corner cabinet)*
- F. Install tops and seal open joints as recommended by the manufacturer

3.4 BASE

- A. Install rubber base in toe space of all base cabinets

3.5 ADJUSTMENT AND CLEANING

- A. After completion of all connections remove all protective coatings and thoroughly clean all finish surfaces to remove markings, labels, and fingerprints
- B. All tops, backsplashes, and reagent shelves shall be cleaned and polished
- C. All equipment shall then be put into operating and adjusted for proper working conditions

3.6 DEMONSTRATION

- A. At date and time designed by Engineer, demonstrate the use of equipment to the Owner's operating personnel

END OF SECTION

