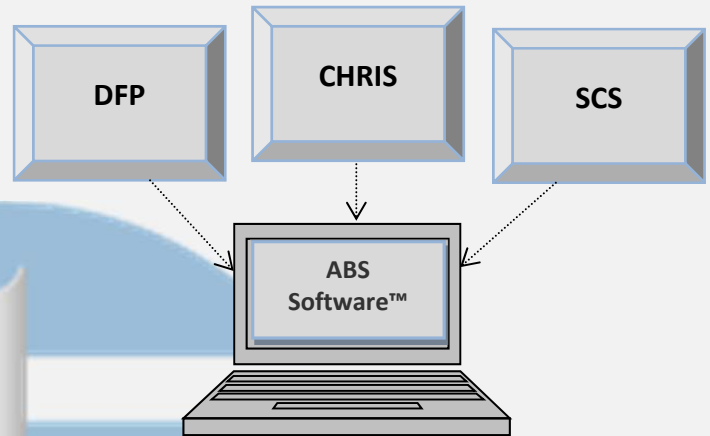


The Chemistry Routing System (**CHRIS**) is an add-on product that automates the collection and dissemination of analytical test results. CHRIS was designed and developed to enhance the ABS Software™ by providing improved shop chemistry control and eliminating manual chemistry input errors. CHRIS will:

- Process and distribute heel and preliminary chemistry test results directly to the Least Cost Charge Design (MIX) and the Least Cost Alloy Additions (TAP) programs.
- Process and distribute chemistry test results for all incoming scraps and recycled materials directly to the Scrap Control System (SCS) program.
- Process and distribute final test results directly to the Management Reporting System (MARS) program.
- Provides a hands-free chemistry collection, distribution and data storage system.
- Interfaces with most major manufacturers' analytical instruments, thereby providing more cost-effective utilization of existing analytical testing equipment.



Final Chemistry – The third lab test that the CHRIS program can process is final chemistry. Final chemistry results are the results taken at tap or casting time. CHRIS collects and stores the final chemistry results in an historical database, which can be made available to virtually anyone connected to the network. This chemistry data bank eliminates the redundant collection and distribution of the final chemistry test results. Information in the chemistry data bank can be selected by various key identifiers such as alloy code, tap date, etc. and exported to the SCS program or other preferred database products.

The CHRIS program can process and distribute the following lab tests:

Hot Metal Chemistry – The first lab test the CHRIS program can process is hot metal chemistry. Hot metal chemistry tests are either heel samples or preliminary samples. CHRIS will distribute the heel or preliminary chemistry to the appropriate ABS Software™ program. This important function eliminates the possibility of manual input errors. In most instances this function also helps reduce the total charge time thereby helping to reduce total operating costs.

Scrap Chemistry – The second lab test that the CHRIS program can process is incoming or recycled scrap chemistry. Scrap chemistry results are distributed and stored in the received scrap chemistry database. The SCS program provides the ability to later transfer the scrap chemistry to the active ABS Software™ inventory. When scrap chemistries are transferred to the active inventory, the scrap receipts and scrap transferred databases are updated. Therefore, all scrap chemistry information is collected and distributed without any manual intervention. This hands-off chemistry distribution system enables better chemistry control.

The CHRIS program can operate in a single or network environment. The following illustrates a typical network configuration:

