Title: SQL Test Procedures For Assay Results Data Range Verification

IT Code: 43370

Purpose: As part of CLASS Labs auto-verification procedures for assay results, all assay results are automatically verified by IT (before release) against ranges established by the Lab Director. This verification is performed by a custom T-SQL Stored Procedure developed at CLASS.

Procedure: As part of the IT assay data release process, each assay release candidate is range tested using a T-SQL Stored Procedure. Samples found to have values outside of these ranges are treated as detailed in IT SOP #43360.

The SQL procedure creates a new table (relation) to hold information about samples detected as having out of range results. It then tests all the results among the release candidates for such out of range samples using a table of established values (see IT SOP #43360).

The current version of this Stored Procedure is as follows:

```sql
IF exists (select * from dbo.sysobjects where id = object_id(N'[dbo].[swn_range_check1]') and OBJECTPROPERTY(id, N'IsProcedure') = 1)
    drop procedure [dbo].[swn_range_check1]
GO

SET QUOTED_IDENTIFIER ON
GO
SET ANSI_NULLS ON
GO

CREATE PROCEDURE [swn_range_check1] AS

DROP TABLE range_check1, range_check2, TSH_rslt

SELECT *
 INTO range_check1
 FROM swn_release_raw
 WHERE (myType = 'SR' AND (plan_assy = 'FSH' AND ( temp_rslt < 1.2 OR temp_rslt > 287.0)) OR
 (plan_assy = 'SHBG' AND ( temp_rslt < 2.0 OR temp_rslt > 250.0)) OR
 (plan_assy = 'T' AND ( temp_rslt < 5.0 OR temp_rslt > 100.0)) OR
 (plan_assy = 'DHAS' AND ( temp_rslt < 20.0 OR temp_rslt > 600.0)) OR
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(plan_assy = 'TSH' AND ( temp_rslt < .3 OR temp_rslt > 10.0)) OR
(plan_assy = 'E2a' AND ( temp_rslt < 5.0 OR temp_rslt > 800.0)) OR
(plan_assy = 'E2b' AND ( temp_rslt < 5.0 OR temp_rslt > 800.0)) OR
(plan_assy = 'LH' AND ( temp_rslt < 0.07 OR temp_rslt > 200.0)) OR
(plan_assy = 'PROG' AND ( temp_rslt < 0.11 OR temp_rslt > 40.0)) OR
(plan_assy = 'INHA' AND ( temp_rslt < 10.0 OR temp_rslt > 1000.0)) OR
(plan_assy = 'INHB' AND ( temp_rslt < 15.0 OR temp_rslt > 200.0))) OR
(myType = 'UR' AND
(plan_assy = 'UFSH' AND ( temp_rslt < 0.3 OR temp_rslt > 254.0)) OR
(plan_assy = 'ULH' AND ( temp_rslt < 0.1 OR temp_rslt > 30.7)) OR
(plan_assy = 'PDG' AND ( temp_rslt < 0.01 OR temp_rslt > 25.3)) OR
(plan_assy = 'E1C' AND ( temp_rslt < 0.51 OR temp_rslt > 471.0)) OR
(plan_assy = 'CREA' AND ( temp_rslt < 0.05 OR temp_rslt > 9.7)) OR
(plan_assy = 'INHA' AND ( temp_rslt < 10.0 OR temp_rslt > 1000.0)) OR
(plan_assy = 'INHB' AND ( temp_rslt < 15.0 OR temp_rslt > 200.0)))

-- ORDER BY plan_index

-- COPY TO d:\vfp6_swan\temp\range_check1.xls TYPE XL5
GO
SET QUOTED_IDENTIFIER OFF
GO
SET ANSI_NULLS ON
GO