Recover Codes Cycle

For Ves Matic Cube 80 Ver. 2.30

Document Revision 1.0

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**Description of the recover codes procedure for Ves Matic Cube 80 (14/09/2012) V.2.30**

The recover codes procedure has been realized to retrieve the information and codes of the test tubes present inside the analysis module in the event of movement or jam error. During the recover procedure, test tubes present in chain are extracted and barcodes are read again. The information about the barcodes are restored from a backed up situation just before the error.

The normal analysis cycle is resumed at the end of the recovery procedure.

a. If there is an alarm in the Analysis Module, the operator is informed by means of an alarm signal and a message box on the screen.

![Alarm Signal and Message Box]

b. If there is a chain movement error, the recovery procedure start automatically after the instrument reset sequence.

The test tube information present in chain are backed up. Recovery procedure read again the barcode of test tubes present in chain and search it inside the previously backed up information.

- If the barcode match with a test tube that have competed the analysis cycle all information are restored and the test tube is displayed like complete.
- If the barcode match with a test tube that doesn’t have completed the analysis cycle, all information are restored except for the reading test tube and displayed like present to be analyzed.
- If the barcode doesn’t match with any test tube, is displayed like a new test tube to be analyzed.
- If unable to read barcode, the test tube is displayed like a new test tube to be analyzed without code.

c. If there is a movement error in any device connected to the analysis module (besides the chain), a message box ask to the operator to perform or not the recover procedure.

![Message Box]

- Press **RECOVER** if the operator needs to manually move the chain in order to resolve the blocking of the chain
- Press **CONTINUE** to restart the analysis if the operator did not need to manually move the chain in order to resolve the blocking of the chain or the previous positions were not altered.
Messages relating to additional modifications

- Message displayed during recover codes procedure

- Error message from the analysis module, remove the cause of the blockage before making the next selection.

- Recover selection message if a device connected to the analysis module (besides the chain) is blocked. The user can choose or not to perform the recover procedure

- Blockage error during a movement outside the analysis cycle, any samples present in chain will be cancelled. The possible causes are:
- Blockage during a movement made from the user menu.

- Conflict error of a device involved in the movement of the chain (mixer out of position, for example).

- Blockage error during a movement inside the “Service” menu. The operator can chose to perform or not the movement.

- Other changes made to the Ves Matic Cube 80 Software
(MOD) Renamed Files:
- Analisi.cs in AnalysisModule.cs
- CheckDevice.cs in CheckDeviceManager.cs
- Classifier.cs in ClassifierModule.cs

(MOD) Created files:
- RecoverManager.cs
- CoverManager.cs

- Add ASTM protocol
- Update VES value after method 3 procedure
- Add test tube bottom control
- Update host end ack timeout
- Add presents control of regressioni.txt and regres_data.txt
- Add firmware version backup in vescube.ini
- Update analysis countdown timer
- Update the step chain function with control on movement conflict
- Add button for disable alarm inside the window alert message
- Add alert window message during a movement inside the “Service” menu. The operator can choose to perform or not the movement

- New message in language.ini:

209=RECOVER
210=DOWNLOAD
211=PENDING
212=Sample ID {0} removed from pos.{1}
213=New Sample added in pos.{0}
214=Reference Searching Procedure
215=Remove the jam condition and press OK
216=Choose the between the following options: If removing the jam condition the chain position has been modified press [RECOVER] otherwise press [CONTINUE]
217=CONTINUE
218=Cap not detected. Remove manually.
219=Movement serious error. The analysis of the samples present in the Analysis Module will be nulled.
220=Recover codes

221=Possible conflict with device {0} and {1}. Do you want to continue?

- **Changes relative to code reorganization**
  - The Analysis class containing the testing process management functions was renamed AnalysisModule contained in the file with this same name.
  
  - The Classificator class was renamed ClassificatorModule
    
    It contains the classes for managing the following processes:
    
    - ExecStep: exec positioner step
    - LoadsampleHolder: load sample older
  
  - ProcReset() was moved from the previous Analysis class to General
  
  - ReadCoverSwitch() and SM_CoverProc() moved from the previous General to CoverManager
    - ChkMovimentazione moved from class FrmService to Varie.
  
  - Create class ClassifierLoad for state machine SM_ClassifierLoad and moved from AnalysisModule to ClassificatorModule
  
  - Create class ClassifierStep for state machine SM_ClassifierStep and moved from AnalysisModule to ClassificatorModule
  
  - The state machine SM_ClassifierLoad moved from AnalysisModule to ClassificatorModule
  
  - Create class LoadSampleInBarcode for state machine SM_LoadSampleInBarcode
  
  - Create class BarcodeReq for state machine SM_BarcodeReq
  
  - Create class InsertInChain for state machine SM_InsertInChain
  
  - Create class ExtractSampleFromChain for state machine SM_ExtractSampleFromChain
  
  - Create class UnloadSample for state machine SM_UnloadSample

- **Log messages added to the events file**
  
  - "004B SERIOUS ERROR DEVICE 0x01": Blockage error during a movement outside the analysis cycle (ex. blockage during a movement made from the user menu)
  
  - "0052 USER RECOVER SELECTION: CONTINUE" (o RECOVER): Selection made by the operator after a blockage
  
  - "FILE REGRESSIONI.TXT NOT FOUND": File regressioni.txt not found
  
  - "FILE REGRES_EDTA.TXT NOT FOUND": File regres_edta.txt not found
  
  - "0052 RECOVER PROCEDURE": Start recover procedure