

# Freelance Formulation

## Recipe management for Freelance, the distributed control system for process industries



Sequential Function Chart for recipe management

Freelance Formulation is an essential recipe management component for single product or multi-grade product applications. Freelance Formulation provides recipe management the easy way.

Typical applications areas are:

- recipe management in the food and beverage industry
- tank farm automation
- other industries such as cement, fine chemicals, paint, coating, boiler, pharmaceutical, etc.

Freelance Formulation is also a preferred solution for common sequencing applications like continuous process startup/shut-down, equipment sequencing, or cleaning skid control. With these applications you have repeatable execution of activities and can make use of parameters. That means that instead of pure Sequential Function Charts (SFC), Freelance Formulation's flexible parameter management and traceability allows for shorter changeover times from one recipe to another.

### Key functions

- Integrated in Freelance Operations
- ISA 88 terms are used so that batch experts do not need to learn new terms.
- Supports automatic batch reporting
- Supports logging of operator actions
- User administration with Security Lock



Easy navigation to the recipe levels:

**1** = Master Procedure, **2** = Master recipe, **3** = Control recipe

- Life cycle concept with workflow procedure for recipe levels
- Supports configuration and operator mode similar to Freelance Engineering
- Parameter sets are managed as Control Recipes
- Flexible capacity calculation for parameter values included
- The recipes are executed on SFCs.

### Structure of the recipe levels

Three recipe levels are supported:

- **Master Procedure:** represents the SFC which describes steps and associated actions controlled by transitions. For example the equipment needed (mixer, reactor) and the necessary steps to be performed to produce orange juice, such as mixing and dosing of components or pasteurization.
- **Master Recipe:** contains the ingredients and amounts as well as other parameters (duration, reactor temperature, etc.) to produce a norm quantity of the product, for example a barrel of orange juice.
- **Control Recipe:** is generated from the Master recipe to produce a certain quantity of the product, which usually differs from the norm quantity, for example a liter of orange juice. When the Control Recipe is downloaded to the controller, it becomes a Batch.

Easy reporting

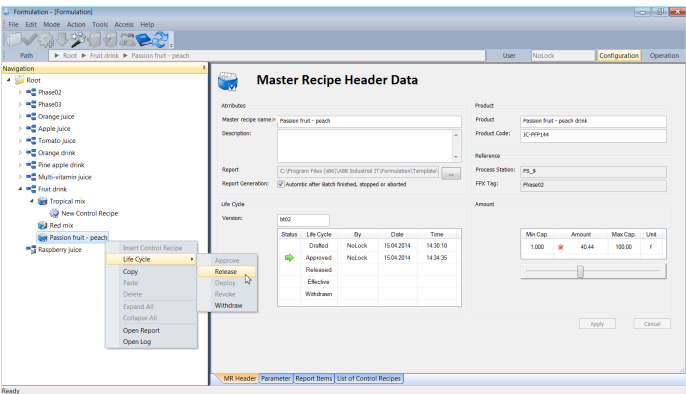
Once a control recipe has been executed or aborted, Freelance Formulation will automatically run a simple batch report based on Microsoft® Excel®.

Easy to use

The user has one tool to configure recipes, organize parameters and create control recipes. It provides all the information the operator needs to manage batches in one simple application, easily integrated into user graphics. Little or no knowledge of a batch manager software package is required to use Freelance Formulation. This results in less time learning a tool, and more time to focus on the process.

Summary of benefits

- **Easy to use:** The tool is very easy to learn and does not require intensive training.
- **Value for money:** competitively priced and yet comprehensive recipe management solution.
- **Easy to integrate:** fully integrated solution for Freelance, accessible via right-click from the faceplate in Freelance Operations.



Formulation Life Cycle Management

Cherry juice						
Status:	Finished				Report Tim	2014-03-05 08:28:52 Operator CIP02
Basic Batch Information						
Batch ID:	Cherry juice -2014-04-098	Batch Name:	Cherry juice 8	Batch Amount:	48.55 m³	
Batch Duration:	0d 00h 01m 15s	Start Time:	2014-03-05 08:27:36	End Time:	2014-03-05 08:28:50	
Basic Master Recipe Information						
Master Recipe Name:	Cherry juice	Version:	3	Product ID:	350078	
Product Name:	Cherry juice 8	Normal Amount:	28.83 m³	Author:	NoLock	
Deploy by:	SVS07	Last Change at:	2014-02-25 10:39:30			
Description:						
Basic Master Procedure Information						
Master Procedure Name:	Sequence02	SFC Display:	Formula_SFC2	FPX Name:	Phase02	
Minimum Capacity:	1,000 m³	Maximum Capacity:	100.00 m³			
Description:						
Parameter Information						
Parameter Name	Variable Name	Conf. Value	Final Value	Data Type	Eng. Unit	
Recipe02SVIA	Recipe02SVIA	33.88	33.88	Float32	l	
Recipe02SVIB	Recipe02SVIB	16.84	16.84	Float32	l	
Recipe02SVWT	Recipe02SVWT	55.00	55.00	Float32	°C	
Recipe02FQ_EN	Recipe02FQ_EN	1	1	Boolean		
Additional Report Items						
Report Item Name	Variable Name	Good Range	Std. Good Range	Ext. Report Value	Data Type	Eng. Unit
Report02Rep1	Report02Rep1	0	1	0	Boolean	
Report02Rep2	Report02Rep2	0	1	0	Boolean	
Report02Rep3	Report02Rep3	0	1	0	Boolean	
Report02Rep4	Report02Rep4	0	1	0	Boolean	
Report02Rep5	Report02Rep5	0	1	0	Boolean	
Report02Rep6	Report02Rep6	0	1	0	Boolean	
Report02Rep7	Report02Rep7	0	1	0	Boolean	
Report02Rep8	Report02Rep8	0	100	0	Boolean	
Report02Rep9	Report02Rep9	0	100	0	Boolean	
Report02V1	Report02V1	0.0000	0.0000	0.0000	Float32	l
Report02V2	Report02V2	0.0000	0.0000	0.0000	Float32	l
Report02V3	Report02V3	0.0000	0.0000	0.0000	Float32	°C
Event Record						
Event	Time	User	Additional Information			
Batch-Download	05.03.2014 08:27	NoLock				
Batch-Start	05.03.2014 08:27	System				
Batch-Ende	05.03.2014 08:28	System				

Automatically generated Batch Report based on Microsoft Excel

For more information please contact us:

[www.abb.com/freelance](http://www.abb.com/freelance)  
[www.abb.com/controlsystems](http://www.abb.com/controlsystems)

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