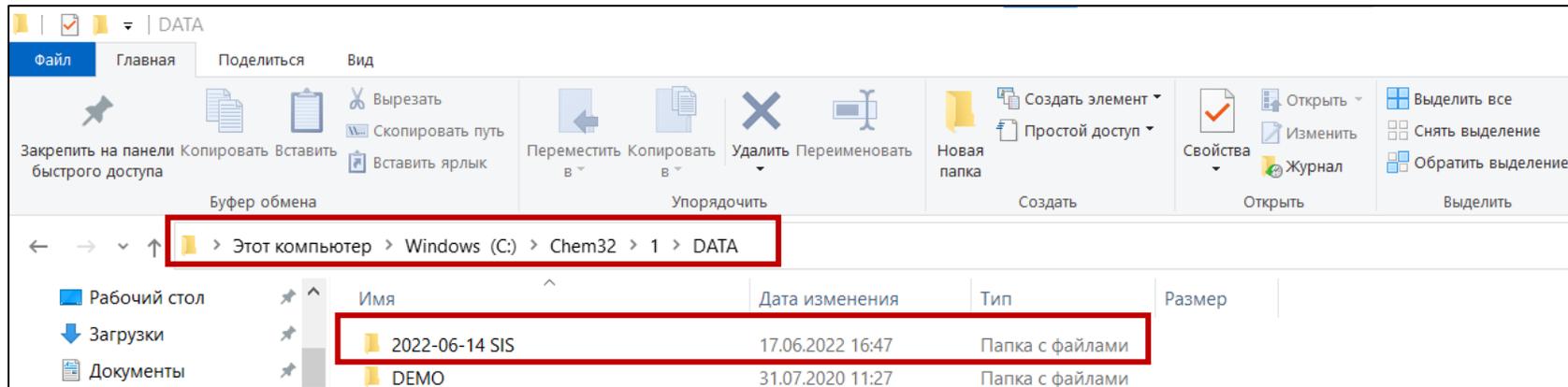
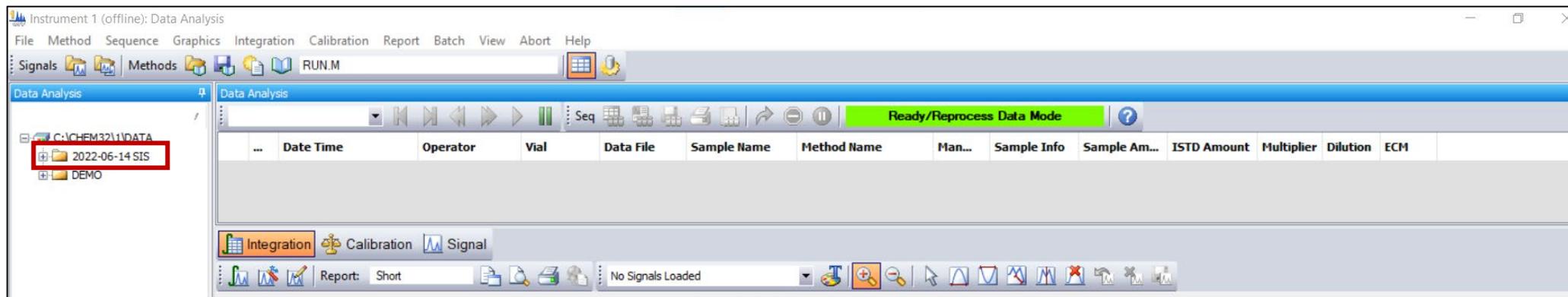


# Метод внешнего стандарта

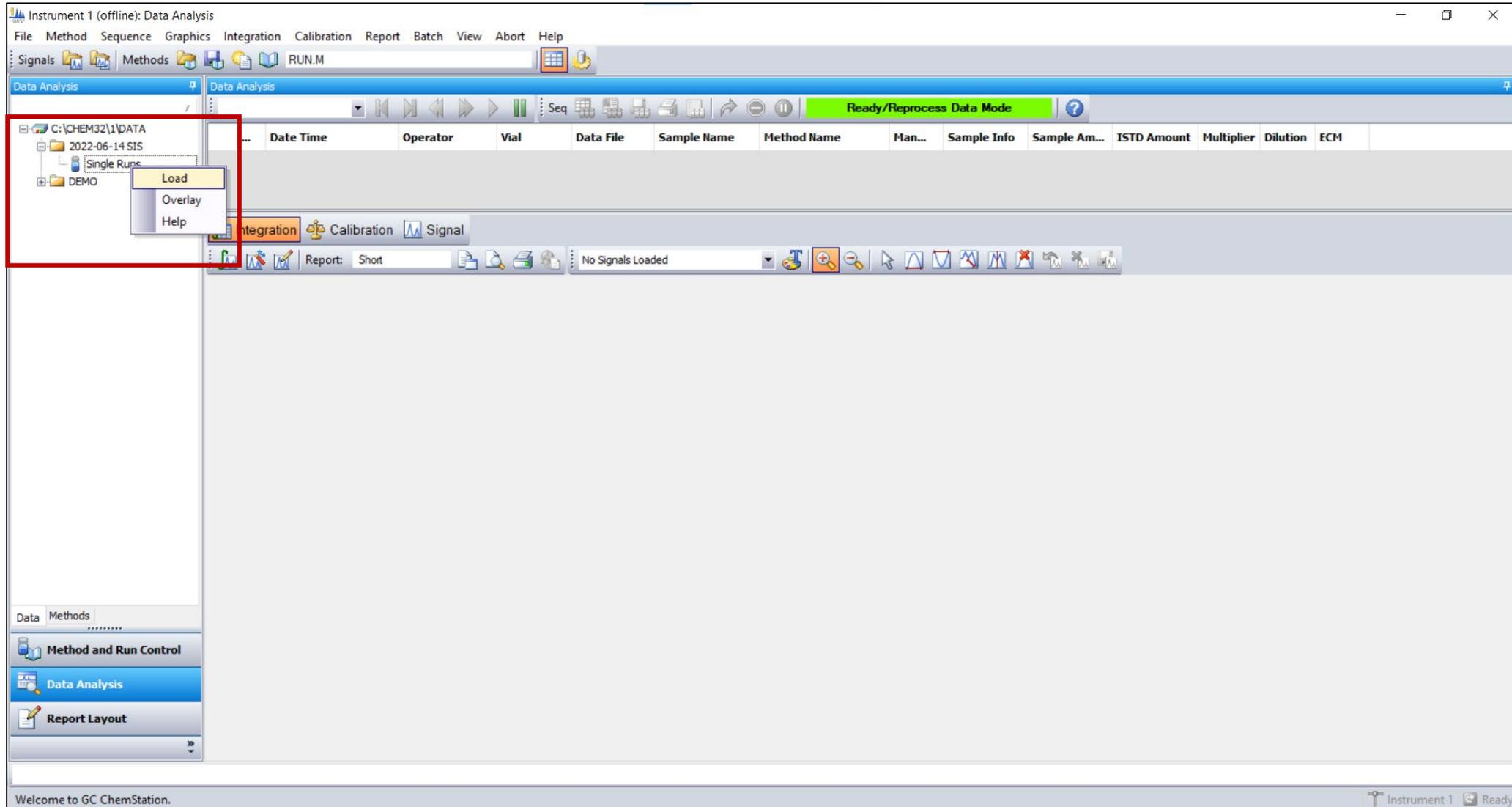
# 1. Поместить папку с измерениями ChemStation



Она появится в ChemStation



# 3. Загрузить файлы



# 3. Появятся файлы

The screenshot displays the Agilent Data Analysis software interface. The top menu bar includes File, Method, Sequence, Graphics, Integration, Calibration, Report, Batch, View, Abort, and Help. The main window shows a list of runs with columns for Date Time, Operator, Vial, Data File, Sample Name, Method Name, and various parameters. A chromatogram plot is visible, showing a signal over time with peaks labeled at 4.567, 4.827, and 4.962 minutes. Below the plot, there is a table with columns for #, Time, Area, Height, Width, and Symmetry. The status bar at the bottom indicates 'Integration done.' and 'Instrument 1 Ready'.

#	Time	Area	Height	Width	Symmetry
1	4.567	105.2	37	0.0432	0.804
2	4.827	2.8E-1	1.2E-1	0.0313	0.926
3	4.962	227732.5	69318.5	0.0523	0.658

## 4. Переключить на калибровку

The screenshot shows the 'Data Analysis' window of the Instrument 1 software. The 'Calibration' button is highlighted in the toolbar. Below it, the 'Calibration Table' and 'Calibration Curve' are displayed. The table contains the following data:

#	RT	Signal	Compound	Lvl	Amt[mg/dm3]	Area	Rsp.Factor	Ref	ISTD	#
1	3.467	FID1 A	ацетальдегид	1	1.070	127469993e-1	2.128	No	No	
				2	1.070	372985482e-1	2.196			
				3	1.070	144193268e-1	2.121			
				4	4.900	2.0109172	2.437			
				5	4.900	1.9230590	2.548			
				6	4.900	1.9028459	2.575			
				7	9.800	3.8160317	2.568			

The 'Calibration Curve' window shows a linear plot of Area vs. Amount (mg/dm3) for acetaldehyde. The equation is  $\text{Area} = 0.37504026 \cdot \text{Amt} + 0.0813393$  and the correlation coefficient is 0.99935.

Появится таблица калибровки

## 5. В таблице калибровки записаны данные ИХ ТЕКУЩЕЙ КАЛИБРОВКИ

Instrument 1 (offline): Data Analysis

File Method Sequence Graphics Integration Calibration Report Batch View Abort Help

Signals Methods RUN.M

Data Analysis

SINGLERUNS: 2022-06-14 SIS

Use current method

Date Time	Operator	Vial	Data File	Sample Name	Method Name
14.06.2022 11:31:44		Vial 101	SIG1G1001752.D	pv 1	VODKA_20

Integration Calibration Signal

Report: Short

FID1 A, (2022-0...IG1G1001752.D) Overview

Calibration Table

#	RT	Signal	Compound	Lvl	Amt[мг/дм3]	Area	Rsp.Factor	Ref	ISTD	#
1	3.467	FID1 A	ацетальдегид	1	1.070	327463933e-1	2.128	No	No	
				2	1.070	372985482e-1	2.196			
				3	1.070	344193268e-1	2.121			
				4	4.900	2.0109172	2.437			
				5	4.900	1.9230590	2.548			
				6	4.900	1.9028459	2.575			
				7	9.800	3.8160317	2.568			
				8	9.800	3.6888621	2.657			
				9	9.800	3.7203672	2.634			
2	4.059	FID1 A	метилацетат	1	0.920	156108570e-1	2.662	No	No	
				2	0.920	284903169e-1	2.801			
				3	0.920	379981327e-1	2.570			
				4	4.600	1.6627353	2.767			
				5	4.600	1.5737258	2.923			
				6	4.600	1.5683570	2.933			
				7	9.200	3.1720650	2.900			
				8	9.200	3.1007736	2.967			
				9	9.200	3.1285894	2.941			
3	4.530	FID1 A	этилацетат	1	0.900	340045261e-1	1.278	No	No	
				2	0.900	194572163e-1	1.386			
				3	0.900	187600493e-1	1.455			
				4	4.500	2.9446971	1.528			
				5	4.500	2.7659011	1.627			
				6	4.500	2.6682594	1.686			
				7	9.000	5.4814734	1.642			
				8	9.000	5.3717275	1.675			
				9	9.000	5.4324498	1.657			

Data Methods

Method and Run Control

Data Analysis

Report Layout

9 измерений:

3 уровня концентраций  
(мг/дм<sup>3</sup>)

3 измерения одного уровня

## 6. Выбрать образец «Кальвадос»

Instrument 1 (offline): Data Analysis

File Method Sequence Graphics Integration Calibration Report Batch View Abort Help

Signals Methods RUN.M

Data Analysis SINGLERUNS: 2022-06-14 SIS

Use current method Ready/Reprocess Data Mode

...	Date Time	Operator	Vial	Data File	Sample Name	Method Name	Man...	Sample Info	Sample Am...	ISTD Amount	Multiplier	Dilution	ECM
<input type="checkbox"/>	14.06.2022 11:31:44		Vial 101	SIG1G1001752.D	ps 1	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 12:08:05		Vial 101	SIG1G1001753.D	ps 1	VODKA_2019.M	-		0	0	0	0	-
<input checked="" type="checkbox"/>	14.06.2022 12:38:52		Vial 101	SIG1G1001754.D	calvados	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 13:13:21		Vial 101	SIG1G1001755.D	konak	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 13:45:56		Vial 101	SIG1G1001756.D	brendi	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 14:17:06		Vial 101	SIG1G1001757.D	pB	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 14:47:57		Vial 101	SIG1G1001758.D	Moscoviya - 95	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 15:19:06		Vial 101	SIG1G1001759.D	2	VODKA_2019.M	-		0	0	0	0	-

Integration Calibration Signal

Report: Short FID1 A, (2022-0...IG1G1001754.D)

FID1 A, (2022-06-14 SIS\SIG1G1001754.D)

#	Time	Area	Height	Width	Symmetry
1	2.341	1.7E-1	8.8E-2	0.0249	0.477
2	2.415	2.2E-1	1E-1	0.03	1.33
3	2.57	2.1E-1	9.6E-2	0.0281	6.527
4	2.618	3.3E-1	1E-1	0.0414	1.036
5	3.117	1.1E-1	9.9E-2	0.0157	2.35
6	3.183	1.8E-1	1.1E-1	0.0301	4.482

File Information

GC-File	SIG1G1001754.D
File Path	C:\CHEM32\1\DATA\2022-06-14 SIS\
Date	14-Jun-22, 12:38:52
Sample	calvados
Sample Info	
Barcode	

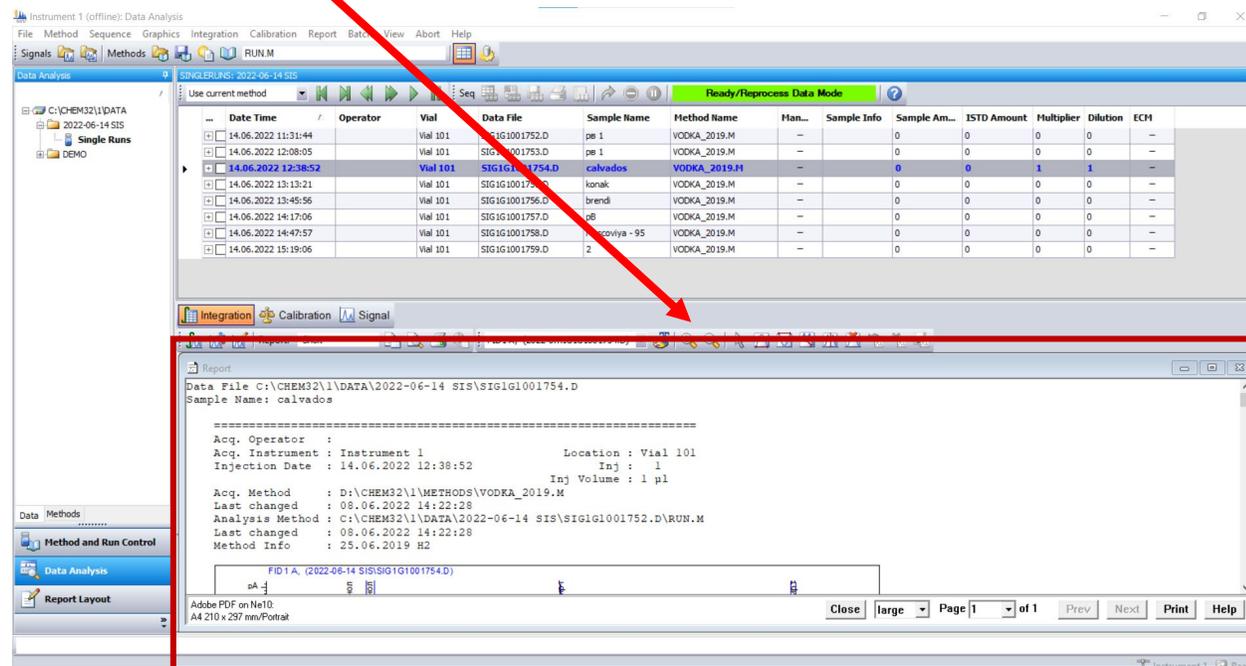
Integration done.

Instrument 1 Ready

## 7. Выбрать «Print report»



Отчет появится внизу



## 8. Нажать «Print» и сохранить как pdf

The screenshot shows the 'Instrument 1 (offline): Data Analysis' software interface. The main window displays a table of data for 'SINGLERUNS: 2022-06-14 SIS'. A red arrow points from the top-left towards the 'Print' button in the bottom-right corner of the report window.

Date Time	Operator	Vial	Data File	Sample Name	Method Name	Man...	Sample Info	Sample Am...	ISTD Amount	Multiplier	Dilution	ECM
14.06.2022 11:31:44		Vial 101	SIG1G1001752.D	pe 1	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 12:08:05		Vial 101	SIG1G1001753.D	pe 1	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 12:38:52		Vial 101	SIG1G1001754.D	calvados	VODKA_2019.M	-		0	0	1	1	-
14.06.2022 13:13:21		Vial 101	SIG1G1001755.D	konak	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 13:45:56		Vial 101	SIG1G1001756.D	brendi	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 14:17:06		Vial 101	SIG1G1001757.D	pe 1	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 14:47:57		Vial 101	SIG1G1001758.D	Moscovita - 95	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 15:19:06		Vial 101	SIG1G1001759.D	2	VODKA_2019.M	-		0	0	0	0	-

The report window displays the following information:

```
Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001754.D
Sample Name: calvados

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 101
Injection Date  : 14.06.2022 12:38:52  Inj      : 1
                                           Inj Volume : 1 µl

Acq. Method    : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed   : 08.06.2022 14:22:28
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed   : 08.06.2022 14:22:28
Method Info    : 25.06.2019 H2
```

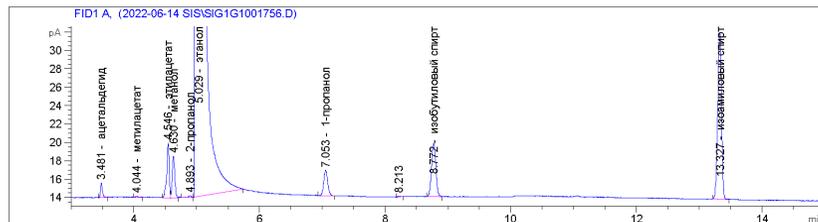
The 'Print' button is highlighted with a red box.

С остальными образцами сделать то же самое

# Бренди

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001756.D  
Sample Name: brendi

```
=====
Acq. Operator   :                               Location : Vial 101
Acq. Instrument : Instrument 1                  Inj       : 1
Injection Date  : 14.06.2022 13:45:56          Inj Volume: 1 µl
Acq. Method    : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed   : 08.06.2022 14:22:28
Analysis Method: C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed   : 08.06.2022 14:22:28
Method Info    : 25.06.2019 H2
=====
```



## External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [µg/DM3]	Grp	Name
3.481	VB	3.41524	2.60288	8.88945		ацетальдегид
4.044	VV	4.28908e-1	2.74790	1.17860		метилацетат
4.546	VV	16.22247	1.67409	27.15791		этилацетат
4.630	VV	12.30149	2.27450e-4	2.79797e-3		метанол
4.893	VV	5.92681e-1	1.55269	9.20250e-1		2-пропанол
5.029	VB S	1.96816e5	2.09954e-4	41.32223		этанол
7.053	VB	12.50008	1.17044	14.63060		1-пропанол
8.772	BV	27.64002	1.04772	28.95890		изобутиловый спирт
11.026	-	-	-	-		1-бутанол
13.327	BV	75.29211	1.00933	75.99442		изоамиловый спирт

Totals : 199.05514

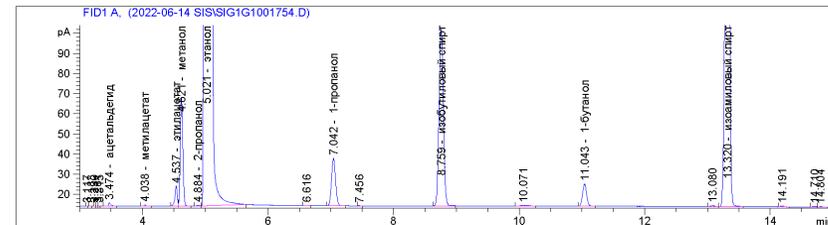
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)  
Warning : Calibrated compound(s) not found

# Кальвадос

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001754.D  
Sample Name: calvados

```
=====
Acq. Operator   :                               Location : Vial 101
Acq. Instrument : Instrument 1                  Inj       : 1
Injection Date  : 14.06.2022 12:38:52          Inj Volume: 1 µl
Acq. Method    : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed   : 08.06.2022 14:22:28
Analysis Method: C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed   : 08.06.2022 14:22:28
Method Info    : 25.06.2019 H2
=====
```



## External Standard Report

```
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
```

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [µg/DM3]	Grp	Name
3.474	VB	4.37917	2.61685	11.45966		ацетальдегид
4.038	VB	1.29350	2.88749	3.73496		метилацетат
4.537	BV	25.59857	1.67785	42.95064		этилацетат
4.621	VB	151.98273	2.37274e-4	3.60615e-2		метанол
4.884	BV	9.12064e-1	1.55533	1.41856		2-пропанол
5.021	VB S	2.08778e5	2.09954e-4	43.83364		этанол
7.042	BV	106.46347	1.17397	124.98468		1-пропанол
8.759	BV	422.47800	1.04901	443.18410		изобутиловый спирт
11.043	BV	49.52847	1.03736	51.37867		1-бутанол
13.320	VB	1356.95068	1.01087	1371.70209		изоамиловый спирт

Totals : 2094.68307

1 Warnings or Errors :

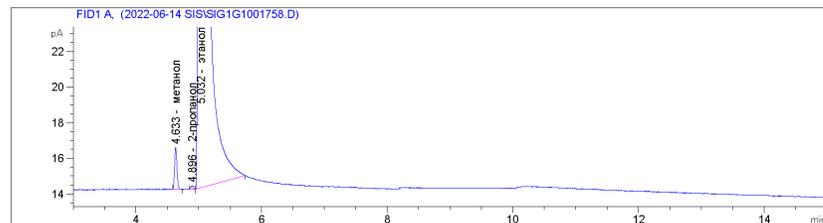
Warning : Calibration warnings (see calibration table listing)

\*\*\* End of Report \*\*\*

# Водка

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001758.D  
Sample Name: Moscoviya - 95

=====  
Acq. Operator :  
Acq. Instrument : Instrument 1 Location : Vial 101  
Injection Date : 14.06.2022 14:47:57 Inj : 1  
Inj Volume : 1 µl  
Acq. Method : D:\CHEM32\1\METHODS\VODKA\_2019.M  
Last changed : 08.06.2022 14:22:28  
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M  
Last changed : 08.06.2022 14:22:28  
Method Info : 25.06.2019 H2



## External Standard Report

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [µg/дм3]	Grp	Name
3.467	-	-	-	-	-	ацетальдегид
4.059	-	-	-	-	-	метилацетат
4.530	-	-	-	-	-	этилацетат
4.633	BV	6.31234	2.17309e-4	1.37173e-3	-	метанол
4.896	BV	5.52898e-1	1.55215	8.58178e-1	-	2-пропанол
5.032	VB S	1.89805e5	2.09954e-4	39.85030	-	этанол
7.029	-	-	-	-	-	1-пропанол
8.740	-	-	-	-	-	изобутиловый спирт
11.026	-	-	-	-	-	1-бутанол
13.306	-	-	-	-	-	изоамиловый спирт

Totals : 40.70985

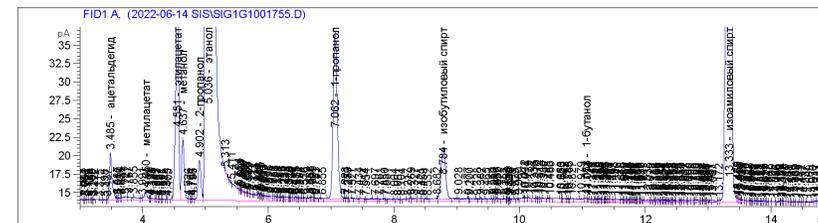
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)  
Warning : Calibrated compound(s) not found

# Коньяк

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001755.D  
Sample Name: konak

=====  
Acq. Operator :  
Acq. Instrument : Instrument 1 Location : Vial 101  
Injection Date : 14.06.2022 13:13:21 Inj : 1  
Inj Volume : 1 µl  
Acq. Method : D:\CHEM32\1\METHODS\VODKA\_2019.M  
Last changed : 08.06.2022 14:22:28  
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M  
Last changed : 08.06.2022 14:22:28  
Method Info : 25.06.2019 H2



## External Standard Report

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [µg/дм3]	Grp	Name
3.485	VV	17.58351	2.65405	46.66744	-	ацетальдегид
4.050	VV	4.13836	2.93509	12.14645	-	метилацетат
4.551	BV	129.27979	1.68307	217.58722	-	этилацетат
4.637	BV	24.71154	2.32818e-4	5.75329e-3	-	метанол
4.902	VV	17.55067	1.55997	27.37843	-	2-пропанол
5.036	VBAS	2.16195e5	2.09954e-4	45.39102	-	этанол
7.062	VV T	104.47670	1.17396	122.65134	-	1-пропанол
8.784	VV T	34.64483	1.04800	36.30766	-	изобутиловый спирт
11.058	VV T	5.61411e-1	9.31777e-1	5.23110e-1	-	1-бутанол
13.333	PV T	854.89056	1.01082	864.13856	-	изоамиловый спирт

Totals : 1372.79698

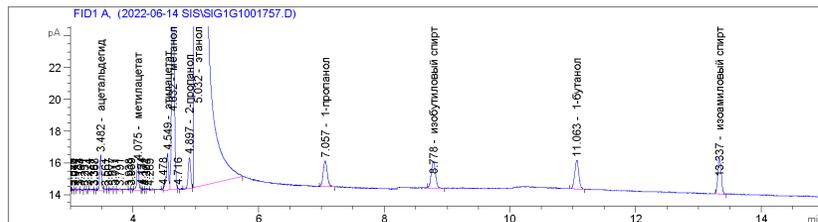
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

# PB-1

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001757.D  
Sample Name: pB

=====  
Acq. Operator :  
Acq. Instrument : Instrument 1 Location : Vial 101  
Injection Date : 14.06.2022 14:17:06 Inj : 1  
Inj Volume : 1 µl  
Acq. Method : D:\CHEM32\1\METHODS\VODKA\_2019.M  
Last changed : 08.06.2022 14:22:28  
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M  
Last changed : 08.06.2022 14:22:28  
Method Info : 25.06.2019 H2



## External Standard Report

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [µg/дм3]	Grp	Name
3.482	VV	4.35420	2.61657	11.39307		ацетальдегид
4.075	BV	3.88449	2.93367	11.39581		метилацетат
4.549	VV	5.88779	1.65607	9.75057		этилацетат
4.632	VV	45.13608	2.35226e-4	1.06172e-2		метанол
4.897	VV	5.53714	1.55941	8.63470		2-пропанол
5.032	VB S	2.01908e5	2.09954e-4	42.39134		этанол
7.057	VB	7.37778	1.16767	8.61479		1-пропанол
8.778	BB	7.94120	1.04428	8.29284		изобутиловый спирт
11.063	BB	8.10547	1.03117	8.35812		1-бутанол
13.337	BB	8.35263	9.96234e-1	8.32117		изоамиловый спирт

Totals : 117.16302

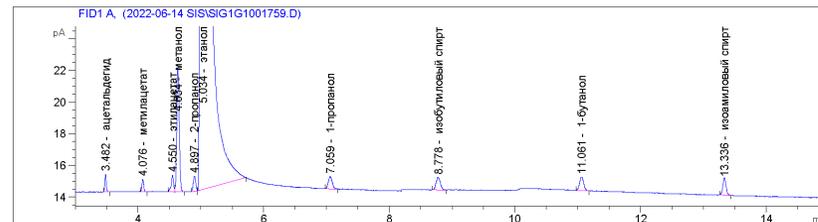
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

# PB-2

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001759.D  
Sample Name: 2

=====  
Acq. Operator :  
Acq. Instrument : Instrument 1 Location : Vial 101  
Injection Date : 14.06.2022 15:19:06 Inj : 1  
Inj Volume : 1 µl  
Acq. Method : D:\CHEM32\1\METHODS\VODKA\_2019.M  
Last changed : 08.06.2022 14:22:28  
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M  
Last changed : 08.06.2022 14:22:28  
Method Info : 25.06.2019 H2



## External Standard Report

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [µg/дм3]	Grp	Name
3.482	BB	1.87640	2.55080	4.78631		ацетальдегид
4.076	BB	1.61751	2.90136	4.69298		метилацетат
4.550	BV	2.73721	1.62350	4.44387		этилацетат
4.634	VB	22.07565	2.32182e-4	5.12558e-3		метанол
4.897	BV	2.66154	1.55854	4.14812		2-пропанол
5.034	VB S	1.92774e5	2.09954e-4	40.47365		этанол
7.059	BB	3.41357	1.15980	3.95907		1-пропанол
8.778	BB	3.85656	1.03917	4.00763		изобутиловый спирт
11.061	BB	3.86672	1.02306	3.95589		1-бутанол
13.336	BB	4.02269	9.80381e-1	3.94377		изоамиловый спирт

Totals : 74.41641

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

# Метод внутреннего стандарта

# 1. Выбрать «Calibration settings...»

The screenshot shows the 'Instrument 1 (offline): Data Analysis' software interface. The 'Calibration' menu is open, and 'Calibration Settings...' is highlighted with a red box. The background shows a data table with columns for Data File, Sample Name, Method Name, and various analysis parameters.

Data File	Sample Name	Method Name	Man...	Sample Info	Sample Am...	ISTD Amount	Multiplier	Dilution	ECH
101 SIG1G1001752.D	ps 1	VODKA_2019.M	-		0	0	0	0	-
101 SIG1G1001753.D	ps 1	VODKA_2019.M	-		0	0	0	0	-
101 SIG1G1001754.D	calvados	VODKA_2019.M	-		0	0	0	0	-

#	F	Area	Rsp.Factor	Ref	ISTD	#
1	3.4	1.070 127469993e-1	2.128	No	No	
		1.070 372985482e-1	2.196			
		1.070 144193268e-1	2.121			
		4.900 2.0109172	2.437			
		4.900 1.9230590	2.548			
		4.900 1.9028459	2.575			
		9.800 3.8160317	2.568			
		9.800 3.6888621	2.657			
		9.800 3.7203672	2.634			
2	4.059	FID1 A метилацетат	1	0.920 156108570e-1	2.662	No No
			2	0.920 284903169e-1	2.801	
			3	0.920 579981327e-1	2.570	
			4	4.600 1.6627353	2.767	
			5	4.600 1.5737258	2.923	
			6	4.600 1.5683570	2.933	
			7	9.200 3.1720650	2.900	
			8	9.200 3.1007736	2.967	
			9	9.200 3.1285894	2.941	
3	4.530	FID1 A этилацетат	1	0.900 140045261e-1	1.278	No No
			2	0.900 194572163e-1	1.386	
			3	0.900 187600493e-1	1.455	
			4	4.500 2.9446971	1.528	
			5	4.500 2.7659011	1.627	
			6	4.500 2.6682594	1.686	
			7	9.000 5.4814734	1.642	

## 2. Внести изменения в Calibration settings

**В окне будет это**

Calibration Settings: Instrument 1

Title: [ ]

Default RT Windows

	Minutes	%
Reference Peaks	0.00 + 5.00	
Other Peaks	0.00	10.00

Default Calibration Curve

Type: Linear

Origin: Include

Weight: Equal

Amount Units: мг/дм<sup>3</sup>

Calculate Uncalibrated Peaks

For Signal: FID1 A.

No

Using Compound: None

With Rsp Factor: 0.000

Use ISTD: None

If Peaks Missing

Correct All RTs  Partial Calibration

OK Cancel Help

**Исправить на**

Calibration Settings: Instrument 1

Title: [ ]

Default RT Windows

	Minutes	%
Reference Peaks	0.00 + 5.00	
Other Peaks	0.00	10.00

Default Calibration Curve

Type: Linear

Origin: Force

Weight: Equal

Amount Units: мг/л безводного спид

Calculate Uncalibrated Peaks

For Signal: FID1 A.

No

Using Compound: None

With Rsp Factor: 0.000

Use ISTD: None

If Peaks Missing

Correct All RTs  Partial Calibration

OK Cancel Help

### 3. Изменить данные концентрации из мг/л в мг/л АА

The screenshot shows the 'Instrument 1 (offline): Data Analysis' software interface. The main window displays a table of chromatographic data. A red arrow points to the 'Help' button in the 'Calibration Table' toolbar. The table below has a red box around the 'Amt[мг/л безводного спирта]' column header.

#	RT	Signal	Compound	Lvl	Amt[мг/л безводного спирта]	Area	Rsp.Factor	Ref	ISTD	#
1	3.467	FID1 A	ацетальдегид	1	1.070	27469993e-1	2.128	No	No	
				2	1.070	72985482e-1	2.196			
				3	1.070	44193268e-1	2.121			
				4	4.900	2.0109172	2.437			
				5	4.900	1.9230590	2.548			
				6	4.900	1.9028459	2.575			
				7	9.800	3.8160317	2.568			
				8	9.800	3.6888621	2.657			
				9	9.800	3.7203672	2.634			
2	4.059	FID1 A	метилацетат	1	0.920	56108570e-1	2.662	No	No	
				2	0.920	84903169e-1	2.801			
				3	0.920	79981327e-1	2.570			
				4	4.600	1.6627353	2.767			
				5	4.600	1.5737258	2.923			
				6	4.600	1.5683570	2.933			
				7	9.200	3.1720650	2.900			
				8	9.200	3.1007736	2.967			
				9	9.200	3.1285894	2.941			
3	4.530	FID1 A	этилацетат	1	0.900	40045261e-1	1.278	No	No	
				2	0.900	94572163e-1	1.386			
				3	0.900	87600493e-1	1.455			
				4	4.500	2.9446971	1.528			
				5	4.500	2.7659011	1.627			
				6	4.500	2.6682594	1.686			
				7	9.000	5.4814734	1.642			

# 4. В результате должно быть

The screenshot shows the 'Data Analysis' software interface. The main window displays a table with columns: #, RT, Signal, Compound, Lvl, Amt[мг/л безводного спирта], Area, Rsp.Factor, Ref, ISTD, #. A red arrow points to the 'Amt' column. A red box highlights the values for ethanol (789270) in the 'Amt' column for RT 4.530.

#	RT	Signal	Compound	Lvl	Amt[мг/л безводного спирта]	Area	Rsp.Factor	Ref	ISTD	#
1	3.467	FID1 A	ацетальдегид	1	2.675	27469993e-1	5.321	No	No	
				2	2.675	72985482e-1	5.489			
				3	2.675	44193268e-1	5.303			
				4	12.250	2.0109172	6.092			
				5	12.250	1.9230590	6.370			
				6	12.250	1.9028459	6.438			
				7	24.500	3.8160317	6.420			
				8	24.500	3.6888621	6.642			
				9	24.500	3.7203672	6.585			
2	4.059	FID1 A	метилацетат	1	2.300	56108570e-1	6.655	No	No	
				2	2.300	84903169e-1	7.002			
				3	2.300	79981327e-1	6.425			
				4	11.500	1.6627353	6.916			
				5	11.500	1.5737258	7.307			
				6	11.500	1.5683570	7.333			
				7	23.000	3.1720650	7.251			
				8	23.000	3.1007736	7.418			
				9	23.000	3.1285894	7.352			
3	4.530	FID1 A	этилацетат	1	2.250	40045261e-1	3.196	No	No	
				2	2.250	94572163e-1	3.464			
				3	2.250	87600493e-1	3.636			
				4	11.250	2.9446971	3.820			
				5	11.250	2.7659011	4.067			
				6	11.250	2.6682594	4.216			
				7	22.500	5.4814734	4.105			

и 789270 для этанола

# 4. В результате должно быть

The screenshot shows the 'Data Analysis' software interface. The 'Calibration Table' window is open, displaying a table with the following columns: #, RT, Signal, Compound, Lv, Amt[мг/л безводного спирта], Area, Rsp.Factor, Ref, ISTD, #. A red arrow points to the 'Help' button in the window's toolbar. A red box highlights the 'Amt[мг/л безводного спирта]' column, which contains values such as 20.500, 789270.000, 2.000, 10.000, 2.000, 2.000, 10.000, 20.000, 2.000, 2.000, 10.000, 2.000, 2.000, 10.000, 2.000, 2.000, 10.000.

#	RT	Signal	Compound	Lv	Amt[мг/л безводного спирта]	Area	Rsp.Factor	Ref	ISTD	#
				9	20.500	5.2141418	3.932			
6	5.011	FID1 A	этанол	1	789270.000	40.0000000	4.134	No	No	
				2	789270.000	80.0000000	4.150			
				3	789270.000	80.0000000	4.137			
				4	789270.000	80.0000000	4.152			
				5	789270.000	80.0000000	4.147			
				6	789270.000	63.9531000	4.142			
				7	789270.000	60.0000000	4.144			
				8	789270.000	50.0000000	4.138			
				9	789270.000	40.0000000	4.142			
7	7.029	FID1 A	1-пропанол	1	2.000	6997247e-1	2.671	No	No	
				2	2.000	3814874e-1	2.687			
				3	2.000	0.7425500	2.693			
				4	10.000	3.4950000	2.861			
				5	10.000	3.4161773	2.927			
				6	10.000	3.4030976	2.938			
				7	20.000	7.0830000	2.824			
				8	20.000	6.7216325	2.975			
				9	20.000	6.7673550	2.955			
8	8.740	FID1 A	изобутиловый спи	1	2.000	6074719e-1	2.476	No	No	
				2	2.000	5640078e-1	2.365			
				3	2.000	5453362e-1	2.543			
				4	10.000	4.0475163	2.471			
				5	10.000	3.7951849	2.635			
				6	10.000	3.7015831	2.702			

и 789270 для этанола

# 5. Нажать сюда

The screenshot shows the 'Data Analysis' window of the software. At the top, there is a menu bar and a toolbar. Below that, a table lists several runs. The main part of the window is a 'Calibration Table' with columns: #, RT, Signal, Compound, Lvl, Amt[мг/л безводного спирта], Area, Rsp.Factor, Ref, ISTD, and #. A red arrow points to the 'ISTD' cell in the second row, which contains the word 'No'. To the right of the screenshot, there is red text: 'и 789270 для этанола'.

#	RT	Signal	Compound	Lvl	Amt[мг/л безводного спирта]	Area	Rsp.Factor	Ref	ISTD	#
6	5.011	FID1 A	этанол	1	789270.000	1940.0000000	4.134	No	No	
				2	789270.000	1200.0000000	4.150			
				3	789270.000	1780.0000000	4.137			
				4	789270.000	1100.0000000	4.152			
				5	789270.000	1330.0000000	4.147			
				6	789270.000	1563.9531000	4.142			
				7	789270.000	1460.0000000	4.144			
				8	789270.000	1750.0000000	4.138			
				9	789270.000	1540.0000000	4.142			
7	7.029	FID1 A	1-пропанол	1	2.000	186997247e-1	2.671	No	No	
				2	2.000	143814874e-1	2.687			
				3	2.000	0.7425500	2.693			
				4	10.000	3.4950000	2.861			
				5	10.000	3.4161773	2.927			
				6	10.000	3.4030976	2.938			
				7	20.000	7.0830000	2.824			
				8	20.000	6.7216325	2.975			
				9	20.000	6.7673550	2.955			
8	8.740	FID1 A	изобутиловый сп	1	2.000	176074719e-1	2.476	No	No	
				2	2.000	155640078e-1	2.365			
				3	2.000	165453362e-1	2.543			
				4	10.000	4.0475163	2.471			
				5	10.000	3.7951849	2.635			
				6	10.000	3.7015831	2.702			

и 789270 для этанола

# 5. Выбрать «Yes»

Instrument 1 (offline): Data Analysis

File Method Sequence Graphics Integration Calibration Report Batch View Abort Help

Signals Methods RUN.M

Data Analysis

Ready/Reprocess Data Mode

Date Time	Operator	Vial	Data File	Sample Name	Method Name	Man...	Sample Info	Sample Am...	ISTD Amount	Multiplier	Dilution	ECM
-----------	----------	------	-----------	-------------	-------------	--------	-------------	--------------	-------------	------------	----------	-----

Integration Calibration Signal

Report: Short

No Signals Loaded

Overview

Calibration Table

Enter Delete Insert... Print OK Help

#	RT	Signal	Compound	Lvl	Amt[мг/л безводного спирта]	Area	Rsp.Factor	Ref	STD	#
				8	20.500	5.2175684	3.929			
				9	20.500	5.2141418	3.932			
6	5.011	FID1 A	этанол	1	789270.000	3940.0000000	4.134	No	No	
				2	789270.000	3200.0000000	4.150	No	No	
				3	789270.000	3780.0000000	4.137			
				4	789270.000	3100.0000000	4.152			
				5	789270.000	3330.0000000	4.147			
				6	789270.000	3563.9531000	4.142			
				7	789270.000	3460.0000000	4.144			
				8	789270.000	3750.0000000	4.138			
				9	789270.000	3540.0000000	4.142			
7	7.029	FID1 A	1-пропанол	1	2.000	486997247e-1	2.671	No	No	
				2	2.000	143814874e-1	2.687			
				3	2.000	0.7425500	2.693			
				4	10.000	3.4950000	2.861			
				5	10.000	3.4161773	2.927			
				6	10.000	3.4030976	2.938			
				7	20.000	7.0830000	2.824			
				8	20.000	6.7216325	2.975			
				9	20.000	6.7673550	2.955			
8	8.740	FID1 A	изобутиловый сп	1	2.000	376074719e-1	2.476	No	No	
				2	2.000	155640078e-1	2.365			
				3	2.000	365453362e-1	2.543			
				4	10.000	4.0475163	2.471			
				5	10.000	3.7951849	2.635			

Calibration Curve

этанол, FID1 A  
Area = 0.24138535\*Amt + 0

Area Rel. Res%(1): 2.2139e-1

Correlation: 1.00000

Amount[мг/л безводного спирта]

## 6. Появится окно, нажать «ОК»

Instrument 1 (offline): Data Analysis

File Method Sequence Graphics Integration Calibration Report Batch View Abort Help

Signals Methods RUN.M

Data Analysis Data Analysis

Ready/Reprocess Data Mode

Calibration Table: Instrument 1

ISTD #: 1

Sample Default ISTD Amount: 789270.000

OK Cancel Help

#	RT	Signal	Compound	Lvl	Am[мг/л безводного спирта]	Area	Rsp.Factor	Ref	ISTD	#
				8	20.500	5.2175684	3.929			
				9	20.500	5.2141418	3.932			
6	5.011	FID1 A	этанол	1	789270.000	3940.0000000	4.134	No	Yes	
				2	789270.000	1200.0000000	4.150			
				3	789270.000	1780.0000000	4.137			
				4	789270.000	1100.0000000	4.152			
				5	789270.000	1330.0000000	4.147			
				6	789270.000	1563.9531000	4.142			
				7	789270.000	1460.0000000	4.144			
				8	789270.000	1750.0000000	4.138			
				9	789270.000	1540.0000000	4.142			
7	7.029	FID1 A	1-пропанол	1	2.000	186997247e-1	2.671	No	No	
				2	2.000	143814874e-1	2.687			
				3	2.000	0.7425500	2.693			
				4	10.000	3.4950000	2.861			
				5	10.000	3.4161773	2.927			
				6	10.000	3.4030976	2.938			
				7	20.000	7.0830000	2.824			
				8	20.000	6.7216325	2.975			
				9	20.000	6.7673550	2.955			
8	8.740	FID1 A	изобутиловый сп.	1	2.000	176074719e-1	2.476	No	No	
				2	2.000	155640078e-1	2.365			
				3	2.000	365453362e-1	2.543			
				4	10.000	4.0475163	2.471			
				5	10.000	3.7951849	2.635			

Calibration Curve

этанол, FID1 A  
Area = 0.24138535\*Am+0

Area Rel. Res%(1): 2.2139e-1

Correlation: 1.00000

Amount[мг/л безводного спирта]

working on "Is ISTD" Instrument 1 Ready

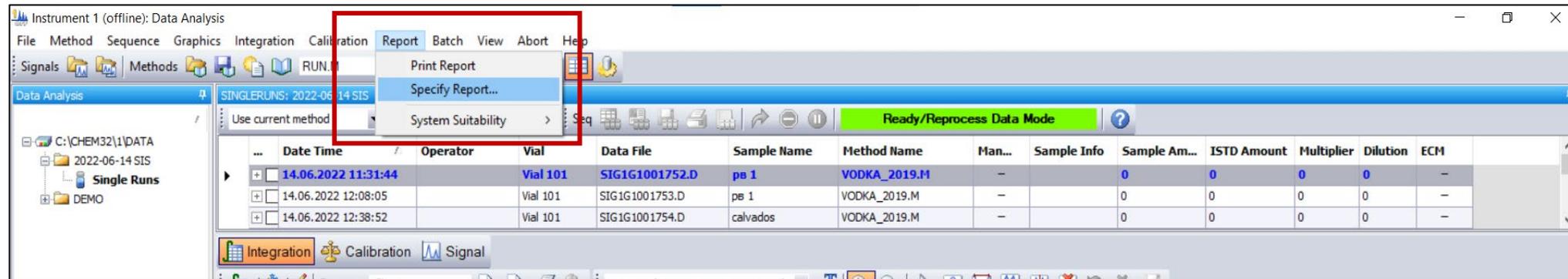
## 7. Около каждого вещества появится «1»

Calibration Table

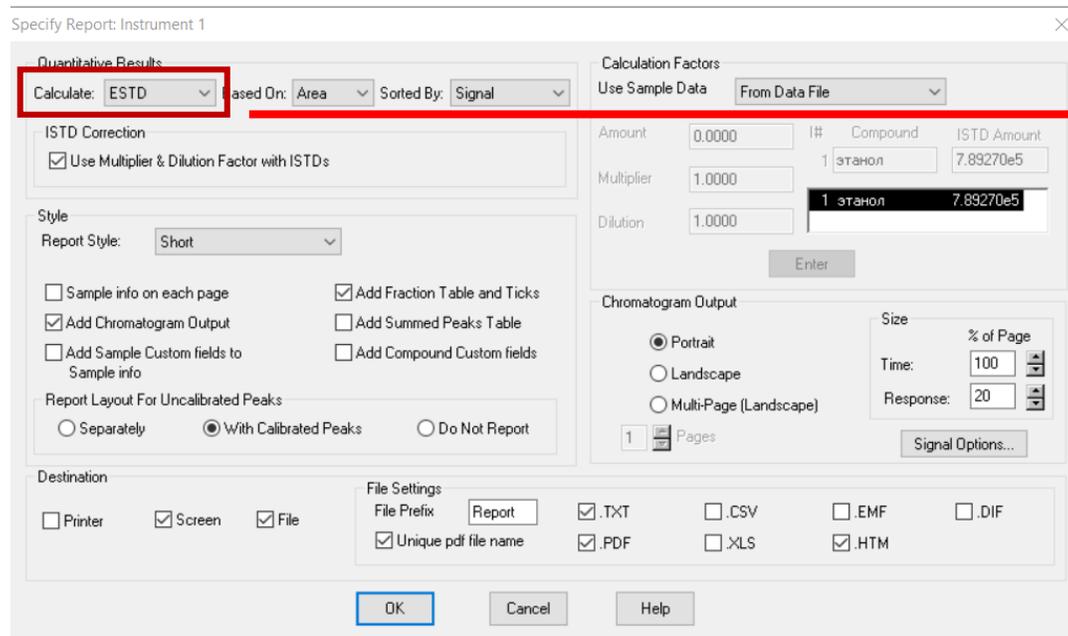
Enter Delete Insert... Print OK Help

#	RT	Signal	Compound	Lvl	Amt[мг/л безводного спирта]	Area	Rsp.Factor	Ref	ISTD	#
				9	2.5500e-2	43.1585541	5.9084e-4			
5	4.876	FID1 A	2-пропанол	1	2.675	346112299e-1	4.086	No	No	1
				2	2.675	340851903e-1	3.910			
				3	2.675	326380897e-1	3.807			
				4	10.500	2.8400869	3.697			
				5	10.500	2.6934211	3.898			
				6	10.500	2.6006663	4.037			
				7	20.500	5.3215928	3.852			
				8	20.500	5.2175684	3.929			
				9	20.500	5.2141418	3.932			
6	5.011	FID1 A	этанол	1	789270.000	3940.0000000	4.134	No	Yes	1
				2	789270.000	3200.0000000	4.150			
				3	789270.000	3780.0000000	4.137			
				4	789270.000	3100.0000000	4.152			
				5	789270.000	3330.0000000	4.147			
				6	789270.000	3563.9531000	4.142			
				7	789270.000	3460.0000000	4.144			
				8	789270.000	3750.0000000	4.138			
				9	789270.000	3540.0000000	4.142			
7	7.029	FID1 A	1-пропанол	1	2.000	386997247e-1	2.671	No	No	1
				2	2.000	343814874e-1	2.687			
				3	2.000	0.7425500	2.693			
				4	10.000	3.4950000	2.861			
				5	10.000	3.4161773	2.927			
				6	10.000	3.4030976	2.938			

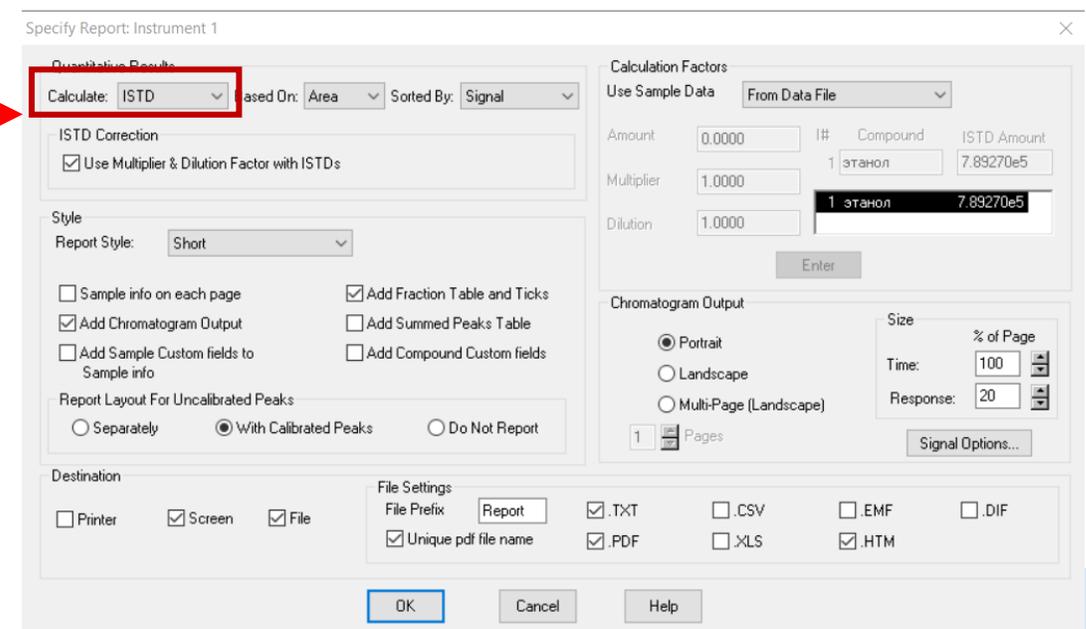
## 8. Выбрать «Specify report»



В окне будет это



Исправить на **ISTD**



# 9. Выбрать образец «Кальвадос»

Instrument 1 (offline): Data Analysis

File Method Sequence Graphics Integration Calibration Report Batch View Abort Help

Signals Methods RUN.M

Data Analysis SINGLERUNS: 2022-06-14 SIS

Use current method Ready/Reprocess Data Mode

...	Date Time	Operator	Vial	Data File	Sample Name	Method Name	Man...	Sample Info	Sample Am...	ISTD Amount	Multiplier	Dilution	ECM
<input type="checkbox"/>	14.06.2022 11:31:44		Vial 101	SIG1G1001752.D	ps 1	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 12:08:05		Vial 101	SIG1G1001753.D	ps 1	VODKA_2019.M	-		0	0	0	0	-
<input checked="" type="checkbox"/>	14.06.2022 12:38:52		Vial 101	SIG1G1001754.D	calvados	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 13:13:21		Vial 101	SIG1G1001755.D	konak	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 13:45:56		Vial 101	SIG1G1001756.D	brendi	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 14:17:06		Vial 101	SIG1G1001757.D	pB	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 14:47:57		Vial 101	SIG1G1001758.D	Moscoviya - 95	VODKA_2019.M	-		0	0	0	0	-
<input type="checkbox"/>	14.06.2022 15:19:06		Vial 101	SIG1G1001759.D	2	VODKA_2019.M	-		0	0	0	0	-

Integration Calibration Signal

Report: Short FID1 A, (2022-0...IG1G1001754.D)

FID1 A, (2022-06-14 SIS\SIG1G1001754.D)

#	Time	Area	Height	Width	Symmetry
1	2.341	1.7E-1	8.8E-2	0.0249	0.477
2	2.415	2.2E-1	1E-1	0.03	1.33
3	2.57	2.1E-1	9.6E-2	0.0281	6.527
4	2.618	3.3E-1	1E-1	0.0414	1.036
5	3.117	1.1E-1	9.9E-2	0.0157	2.35
6	3.183	1.8E-1	1.1E-1	0.0301	4.482

File Information

GC-File	SIG1G1001754.D
File Path	C:\CHEM32\1\DATA\2022-06-14 SIS\
Date	14-Jun-22, 12:38:52
Sample	calvados
Sample Info	
Barcode	

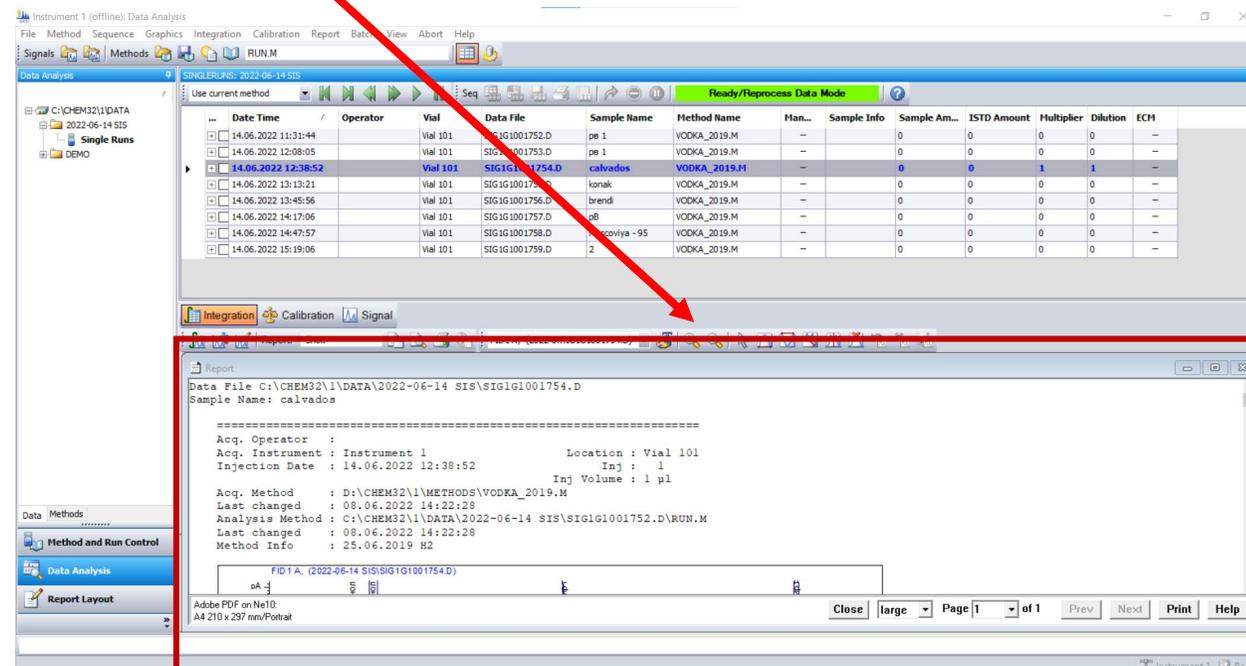
Integration done.

Instrument 1 Ready

# 10. Выбрать «Print report»



Отчет появится внизу



# 10. Нажать «Print» и сохранить как pdf

The screenshot shows the 'Instrument 1 (offline): Data Analysis' software interface. The main window displays a table of data analysis results. A red arrow points from the top left towards the 'Print' button in the bottom right corner of the report window.

Date Time	Operator	Vial	Data File	Sample Name	Method Name	Man...	Sample Info	Sample Am...	ISTD Amount	Multiplier	Dilution	ECM
14.06.2022 11:31:44		Vial 101	SIG1G1001752.D	pe 1	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 12:08:05		Vial 101	SIG1G1001753.D	pe 1	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 12:38:52		Vial 101	SIG1G1001754.D	calvados	VODKA_2019.M	-		0	0	1	1	-
14.06.2022 13:13:21		Vial 101	SIG1G1001755.D	konak	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 13:45:56		Vial 101	SIG1G1001756.D	brendi	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 14:17:06		Vial 101	SIG1G1001757.D	pe 1	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 14:47:57		Vial 101	SIG1G1001758.D	Moscovna - 95	VODKA_2019.M	-		0	0	0	0	-
14.06.2022 15:19:06		Vial 101	SIG1G1001759.D	2	VODKA_2019.M	-		0	0	0	0	-

The report window shows the following text:

```
Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001754.D
Sample Name: calvados

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 101
Injection Date  : 14.06.2022 12:38:52  Inj       : 1
                                           Inj Volume: 1 µl

Acq. Method    : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed   : 08.06.2022 14:22:28
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed   : 08.06.2022 14:22:28
Method Info    : 25.06.2019 H2
```

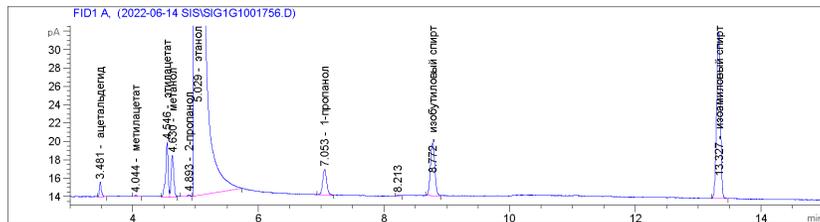
The 'Print' button is highlighted with a red box and a red arrow points to it from the top left of the image.

С остальными образцами сделать то же самое

# Бренди

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001756.D  
Sample Name: brendi

=====  
Acq. Operator :  
Acq. Instrument : Instrument 1 Location : Vial 101  
Injection Date : 14.06.2022 13:45:56 Inj : 1  
Inj Volume : 1 µl  
Acq. Method : D:\CHEM32\1\METHODS\VODKA\_2019.M  
Last changed : 08.06.2022 14:22:28  
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M  
Last changed : 20.06.2022 13:18:05  
(modified after loading)  
Method Info : 25.06.2019 H2



## Internal Standard Report

=====  
Sorted By : Signal  
Calib. Data Modified : 20 June 2022 r. 13:18:05  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs  
Sample ISTD Information:  
ISTD ISTD Amount Name  
# мг/л безво

-----|-----|-----  
1 7.89270e5 этанол

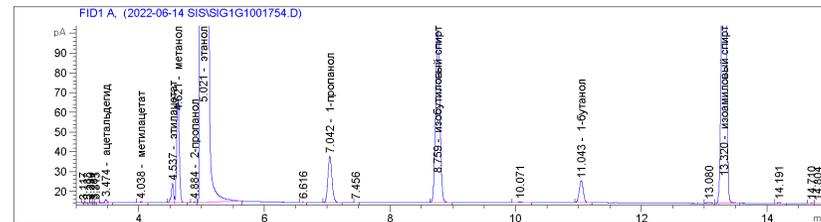
Signal 1: FID1 A,

RetTime [min]	Type	ISTD used	Area [pA*s]	Amt/Area ratio	Amount мг/л безво	Grp	Name
3.481	VB	1	3.41524	1.56500	21.43389		ацетальдегид
4.044	VV	1	4.28908e-1	1.76261	3.03169		метилацетат
4.546	VV	1	16.22247	9.93171e-1	64.61099		этилацетат
4.630	VV	1	12.30149	1.41378e-4	6.97437e-3		метанол
4.893	VV	1	5.92681e-1	9.40935e-1	2.23638		2-пропанол
5.029	VB S I	1	1.96816e5	1.00000	7.89270e5		этанол
7.053	VB	1	12.50008	7.03202e-1	35.24994		1-пропанол
8.772	BV	1	27.64002	6.29313e-1	69.75424		изобутиловый спирт
11.026		1	-	-	-		1-бутанол
13.327	BB	1	75.29211	5.98564e-1	180.72808		изоамиловый спирт

# Кальвадос

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001754.D  
Sample Name: calvados

=====  
Acq. Operator :  
Acq. Instrument : Instrument 1 Location : Vial 101  
Injection Date : 14.06.2022 12:38:52 Inj : 1  
Inj Volume : 1 µl  
Acq. Method : D:\CHEM32\1\METHODS\VODKA\_2019.M  
Last changed : 08.06.2022 14:22:28  
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M  
Last changed : 20.06.2022 13:18:05  
(modified after loading)  
Method Info : 25.06.2019 H2



## Internal Standard Report

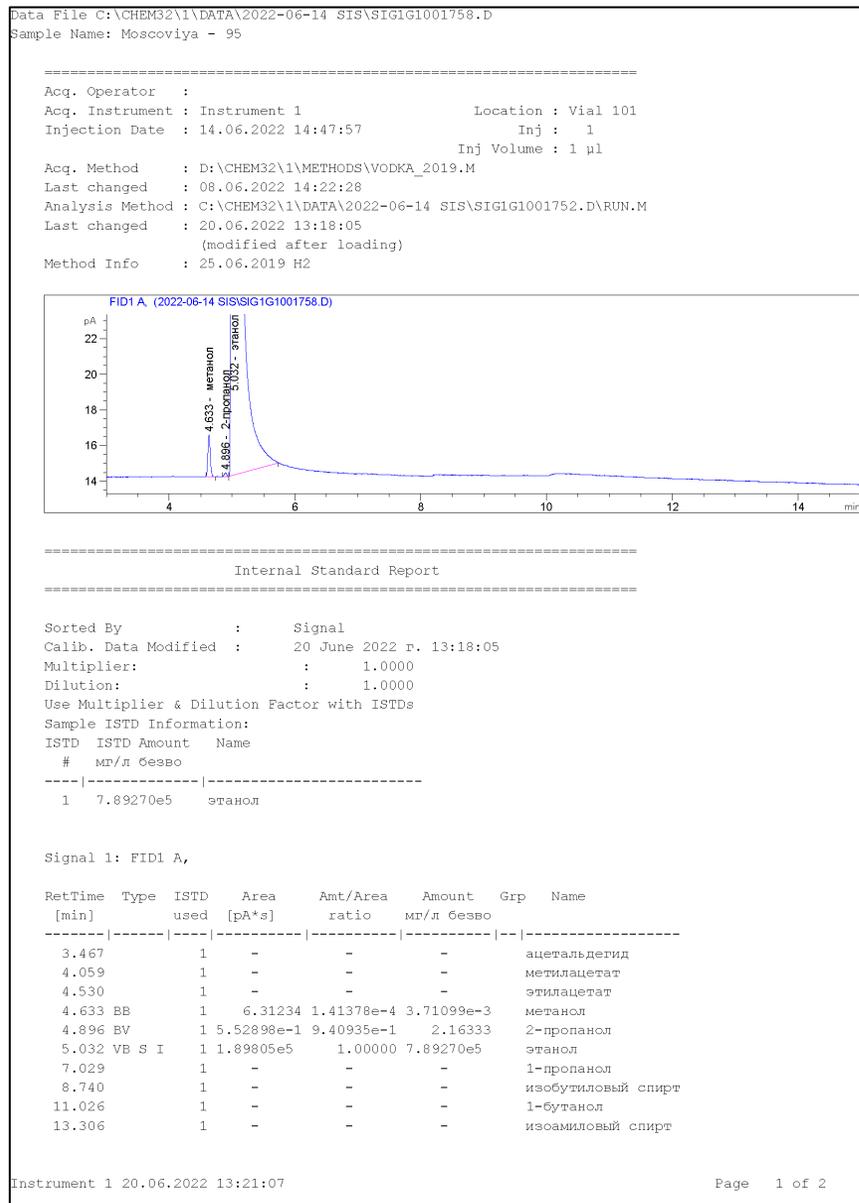
=====  
Sorted By : Signal  
Calib. Data Modified : 20 June 2022 r. 13:18:05  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs  
Sample ISTD Information:  
ISTD ISTD Amount Name  
# мг/л безво

-----|-----|-----  
1 7.89270e5 этанол

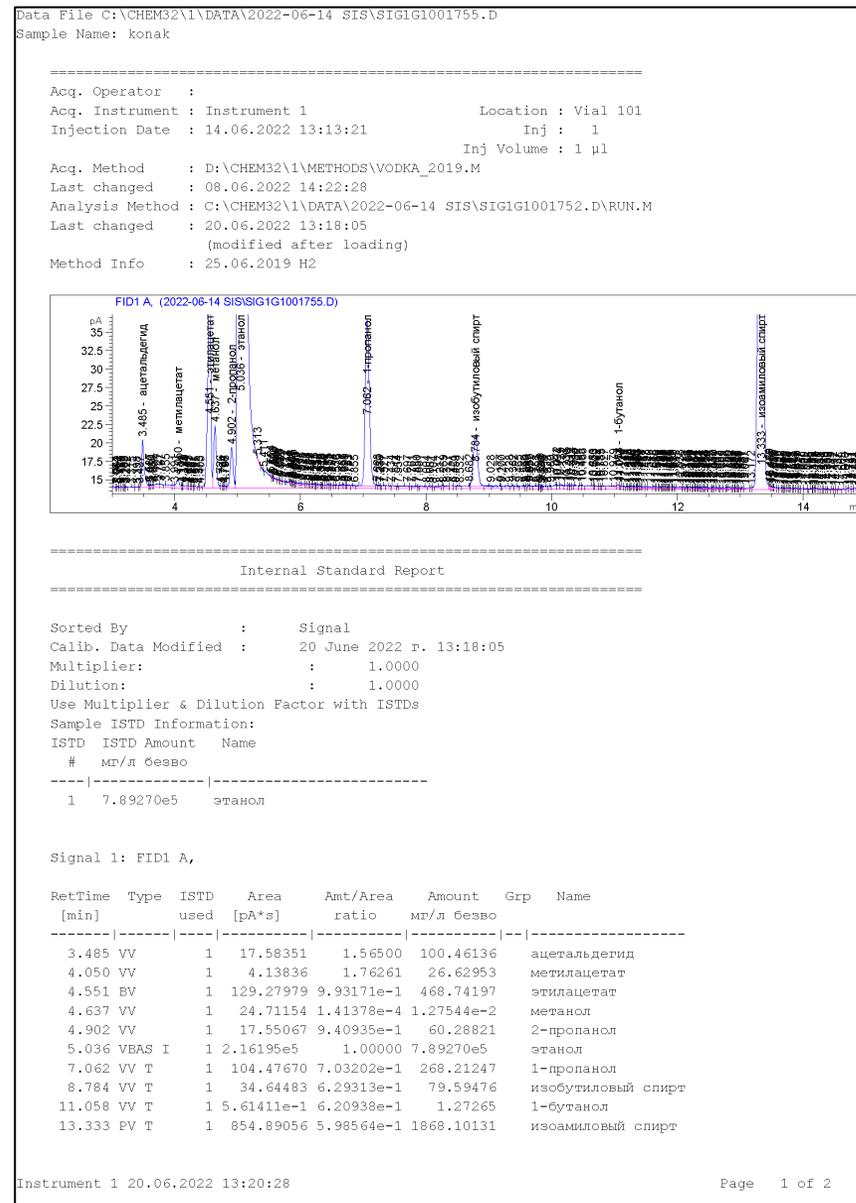
Signal 1: FID1 A,

RetTime [min]	Type	ISTD used	Area [pA*s]	Amt/Area ratio	Amount мг/л безво	Grp	Name
3.474	VB	1	4.37917	1.56500	25.90886		ацетальдегид
4.038	VB	1	1.29350	1.76261	8.61914		метилацетат
4.537	BV	1	25.59857	9.93171e-1	96.11284		этилацетат
4.621	VB	1	151.98273	1.41378e-4	8.12302e-2		метанол
4.884	VB	1	9.12064e-1	9.40935e-1	3.24434		2-пропанол
5.021	VB S I	1	2.08778e5	1.00000	7.89270e5		этанол
7.042	VB	1	106.46347	7.03202e-1	283.02355		1-пропанол
8.759	BV	1	422.47800	6.29313e-1	1005.10763		изобутиловый спирт
11.043	BB	1	49.52847	6.20938e-1	116.26381		1-бутанол
13.320	VB	1	1356.95068	5.98564e-1	3070.55167		изоамиловый спирт

# Водка



# Коньяк

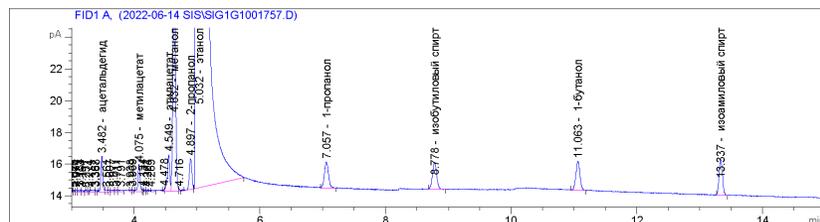


# PB-1

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001757.D  
Sample Name: pB

```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 101
Injection Date  : 14.06.2022 14:17:06 Inj : 1
                                           Inj Volume : 1 µl
Acq. Method     : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed    : 08.06.2022 14:22:28
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed    : 20.06.2022 13:18:05
                                           (modified after loading)
Method Info     : 25.06.2019 H2
    
```



## Internal Standard Report

```

=====
Sorted By      :      Signal
Calib. Data Modified : 20 June 2022 r. 13:18:05
Multiplier:    :      1.0000
Dilution:     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD ISTD Amount Name
#   мг/л безво
    
```

1 7.89270e5 этанол

Signal 1: FID1 A,

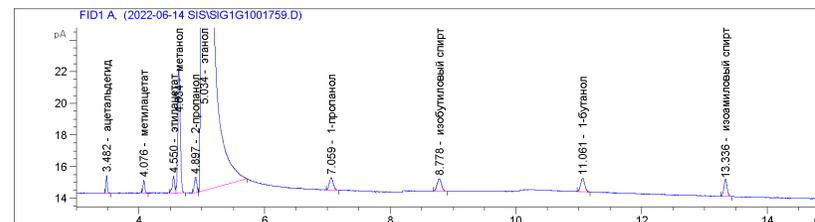
RetTime [min]	Type	ISTD used	Area [pA*s]	Amt/Area ratio	Amount мг/л безво	Grp	Name
3.482	VV	1	4.35420	1.56500	26.63756		ацетальдегид
4.075	BV	1	3.88449	1.76261	26.76465		метилацетат
4.549	VV	1	5.88779	9.93171e-1	22.85851		этилацетат
4.632	VV	1	45.13608	1.41378e-4	2.49447e-2		метанол
4.897	VV	1	5.53714	9.40935e-1	20.36654		2-пропанол
5.032	VV S I	1	2.01908e5	1.00000	7.89270e5		этанол
7.057	VB	1	7.37778	7.03202e-1	20.28048		1-пропанол
8.778	BB	1	7.94120	6.29313e-1	19.53552		изобутиловый спирт
11.063	BB	1	8.10547	6.20938e-1	19.67426		1-бутанол
13.337	BB	1	8.35263	5.98564e-1	19.54367		изоамиловый спирт

# PB-2

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001759.D  
Sample Name: 2

```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 101
Injection Date  : 14.06.2022 15:19:06 Inj : 1
                                           Inj Volume : 1 µl
Acq. Method     : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed    : 08.06.2022 14:22:28
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed    : 20.06.2022 13:18:05
                                           (modified after loading)
Method Info     : 25.06.2019 H2
    
```



## Internal Standard Report

```

=====
Sorted By      :      Signal
Calib. Data Modified : 20 June 2022 r. 13:18:05
Multiplier:    :      1.0000
Dilution:     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
Sample ISTD Information:
ISTD ISTD Amount Name
#   мг/л безво
    
```

1 7.89270e5 этанол

Signal 1: FID1 A,

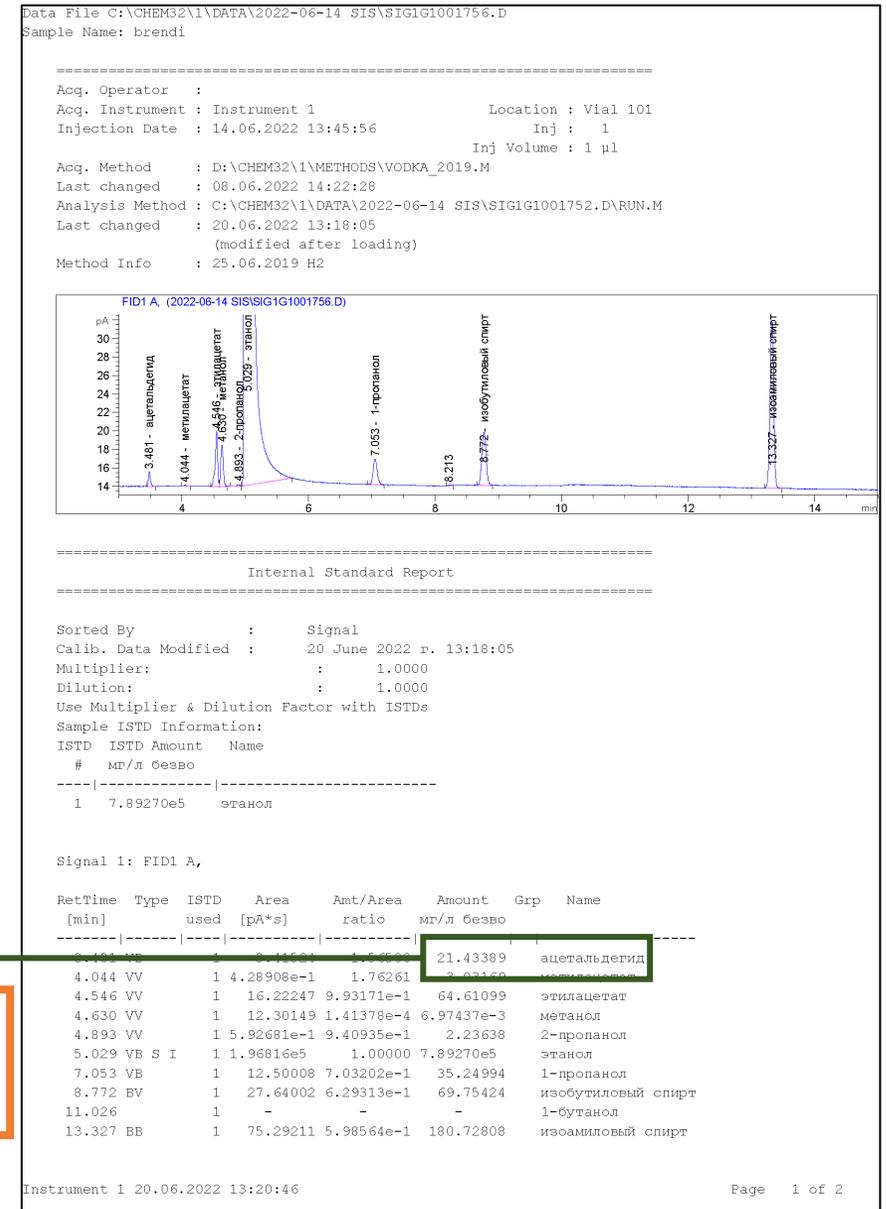
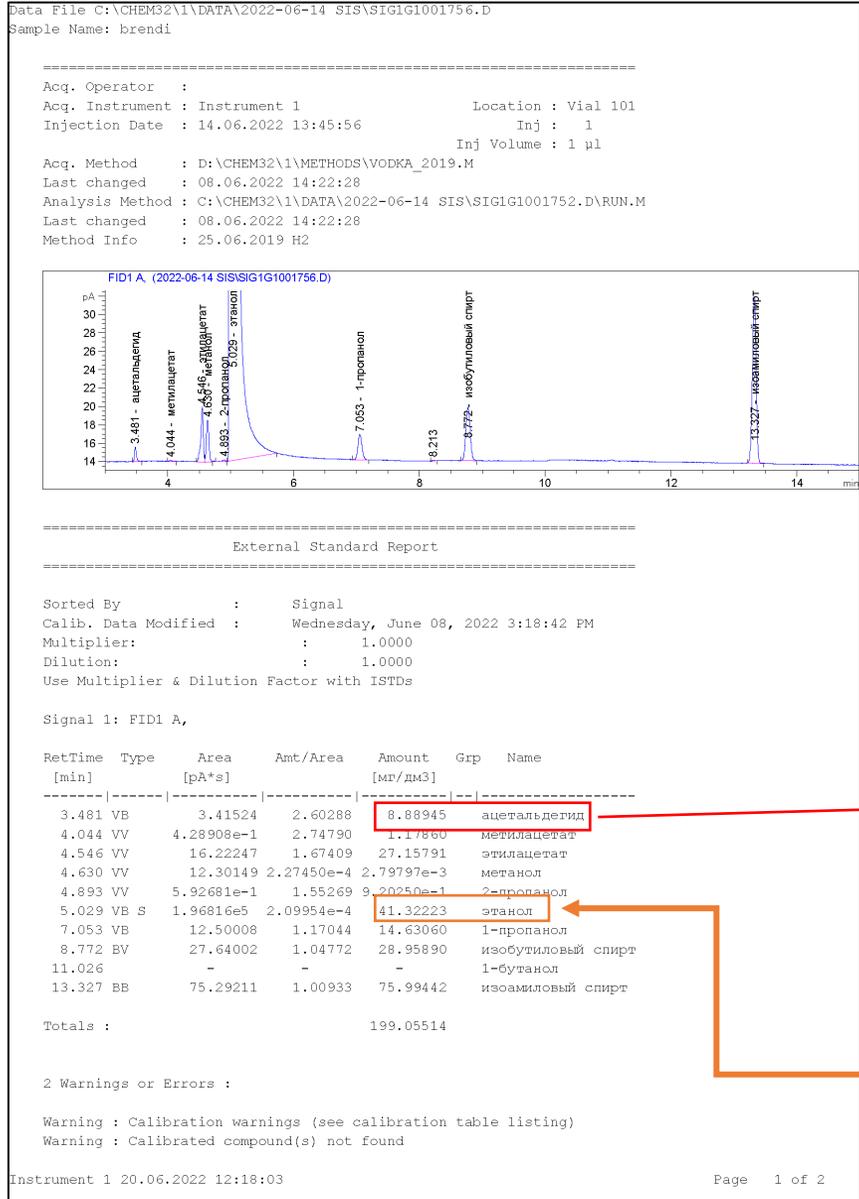
RetTime [min]	Type	ISTD used	Area [pA*s]	Amt/Area ratio	Amount мг/л безво	Grp	Name
3.482	BB	1	1.87640	1.56500	12.02309		ацетальдегид
4.076	BB	1	1.61751	1.76261	11.67293		метилацетат
4.550	BV	1	2.73721	9.93171e-1	11.13037		этилацетат
4.634	VB	1	22.07565	1.41378e-4	1.27783e-2		метанол
4.897	VB	1	2.66154	9.40935e-1	10.25342		2-пропанол
5.034	VV S I	1	1.92774e5	1.00000	7.89270e5		этанол
7.059	BB	1	3.41357	7.03202e-1	9.82802		1-пропанол
8.778	BB	1	3.85656	6.29313e-1	9.93674		изобутиловый спирт
11.061	BB	1	3.86672	6.20938e-1	9.83031		1-бутанол
13.336	BB	1	4.02269	5.98564e-1	9.85836		изоамиловый спирт

# Сравнение полученных результатов

# Метод внешнего стандарта

# Бренди

# Метод внутреннего стандарта



Если значение крепости 40 %

8,88945 мг/л / 0,4 = 22,2 мг/л безводного спирта

$$\frac{21,4 - 22,2}{22,2} \cdot 100 \% = -3,6 \%$$

Однако, значение крепости образца в соответствии с результатами измерений не 40 %.

# Метод внешнего стандарта

# Кальвадос

# Метод внутреннего стандарта

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001754.D  
Sample Name: calvados

=====  
Acq. Operator :  
Acq. Instrument : Instrument 1 Location : Vial 101  
Injection Date : 14.06.2022 12:38:52 Inj : 1  
Inj Volume : 1 µl  
Acq. Method : D:\CHEM32\1\METHODS\VODKA\_2019.M  
Last changed : 08.06.2022 14:22:28  
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M  
Last changed : 08.06.2022 14:22:28  
Method Info : 25.06.2019 H2

External Standard Report

Sorted By : Signal  
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [мг/дм <sup>3</sup> ]	Grp	Name
3.474	VB	4.37917	2.61685	11.45966		ацетальдегид
4.038	VB	1.29350	2.88749	3.73496		метилацетат
4.537	BV	25.59857	1.67785	42.95064		этилацетат
4.621	VB	151.98273	2.37274e-4	3.60615e-2		метанол
4.884	BV	9.12064e-1	1.55533	1.41856		2-пропанол
5.021	VB S	2.08778e5	2.09954e-4	43.83364		этанол
7.042	BB	106.46347	1.17397	124.98468		1-пропанол
8.759	BB	422.47800	1.04901	443.18410		изобутиловый спирт
11.043	BB	49.52847	1.03736	51.37867		1-бутанол
13.320	VB	1356.95068	1.01087	1371.70209		изоамиловый спирт

Totals : 2094.68307

1 Warnings or Errors :  
Warning : Calibration warnings (see calibration table listing)

=====  
\*\*\* End of Report \*\*\*

Instrument 1 20.06.2022 12:07:12 Page 1 of 1

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001754.D  
Sample Name: calvados

=====  
Acq. Operator :  
Acq. Instrument : Instrument 1 Location : Vial 101  
Injection Date : 14.06.2022 12:38:52 Inj : 1  
Inj Volume : 1 µl  
Acq. Method : D:\CHEM32\1\METHODS\VODKA\_2019.M  
Last changed : 08.06.2022 14:22:28  
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M  
Last changed : 20.06.2022 13:18:05  
(modified after loading)  
Method Info : 25.06.2019 H2

Internal Standard Report

Sorted By : Signal  
Calib. Data Modified : 20 June 2022 r. 13:18:05  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:  
ISTD ISTD Amount Name  
# мг/л безво

1	7.89270e5	этанол
---	-----------	--------

Signal 1: FID1 A,

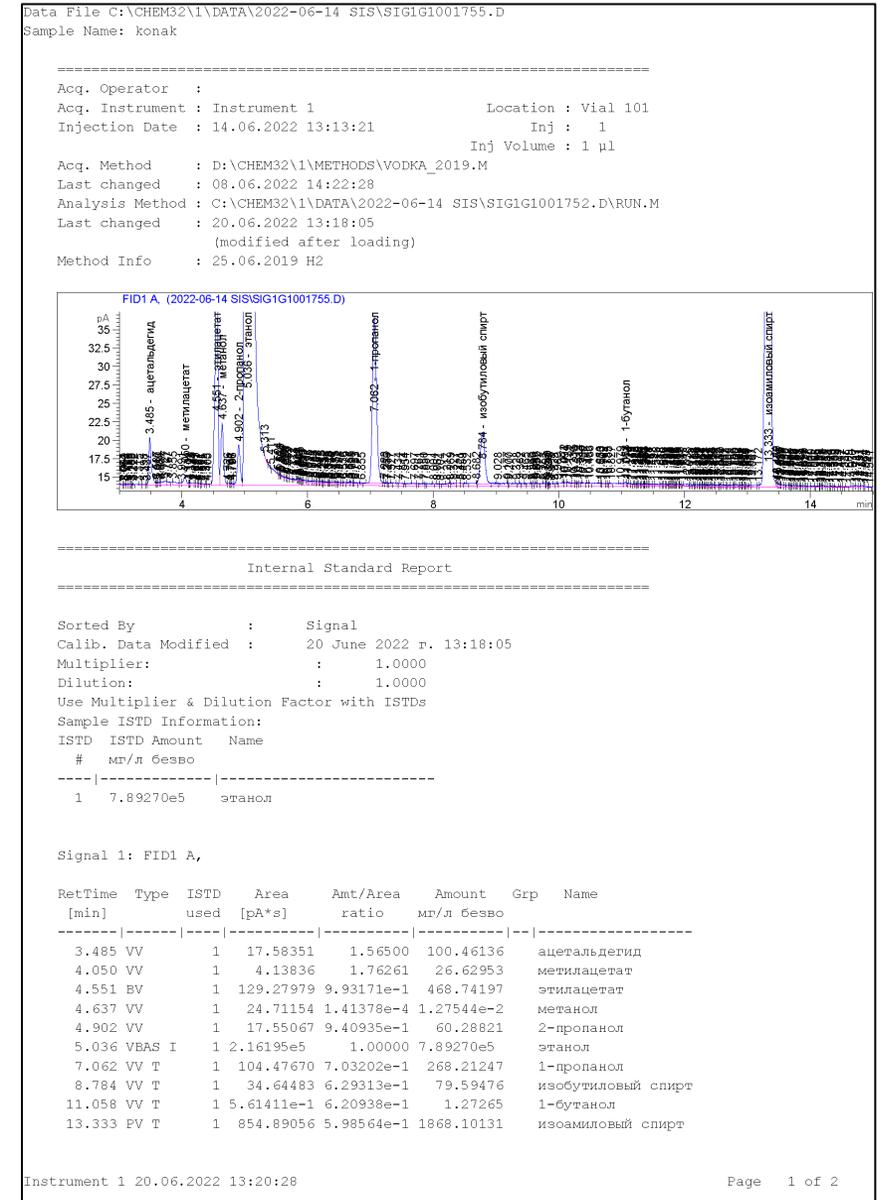
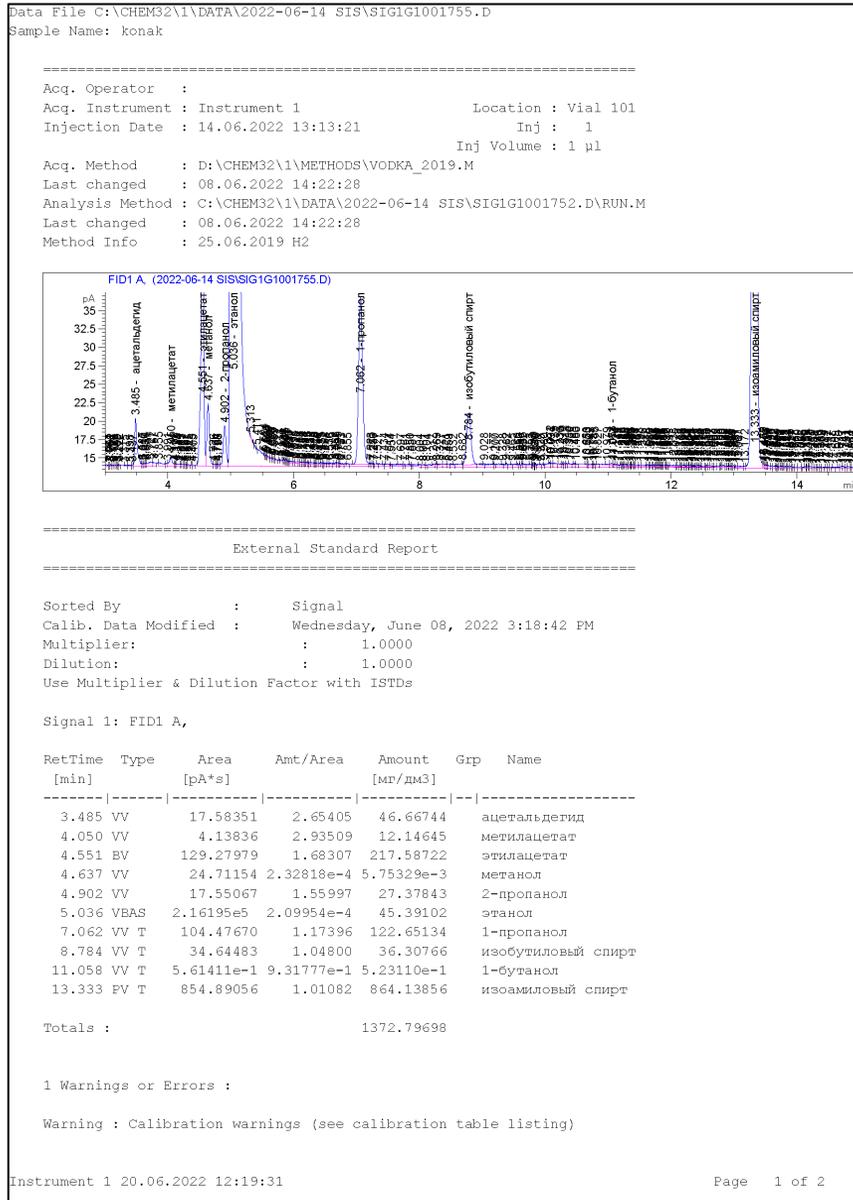
RetTime [min]	Type	ISTD used	Area [pA*s]	Amt/Area ratio	Amount мг/л безво	Grp	Name
3.474	VB	1	4.37917	1.56500	25.90886		ацетальдегид
4.038	VB	1	1.29350	1.76261	8.61914		метилацетат
4.537	BV	1	25.59857	9.93171e-1	96.11284		этилацетат
4.621	VB	1	151.98273	1.41378e-4	8.12302e-2		метанол
4.884	BV	1	9.12064e-1	9.40935e-1	3.24434		2-пропанол
5.021	VB S I	1	2.08778e5	1.00000	7.89270e5		этанол
7.042	BB	1	106.46347	7.03202e-1	283.02355		1-пропанол
8.759	BB	1	422.47800	6.29313e-1	1005.10763		изобутиловый спирт
11.043	BB	1	49.52847	6.20938e-1	116.26381		1-бутанол
13.320	VB	1	1356.95068	5.98564e-1	3070.55167		изоамиловый спирт

Instrument 1 20.06.2022 13:19:50 Page 1 of 2

# Метод внешнего стандарта

# КОНЬЯК

# Метод внутреннего стандарта



# Метод внешнего стандарта

# Водка

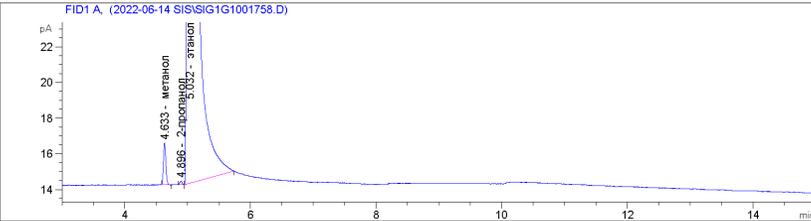
# Метод внутреннего стандарта

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001758.D  
Sample Name: Moscoviya - 95

```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 101
Injection Date  : 14.06.2022 14:47:57 Inj : 1
                                           Inj Volume : 1 µl

Acq. Method    : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed   : 08.06.2022 14:22:28
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed   : 08.06.2022 14:22:28
Method Info    : 25.06.2019 H2
    
```



FID1 A, (2022-06-14 SIS\SIG1G1001758.D)

```

=====
External Standard Report
=====
Sorted By      : Signal
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A,

RetTime  Type  Area      Amt/Area  Amount  Grp  Name
 [min]   [pA*s]
-----
3.467    -      -          -          -      -   ацетальдегид
4.059    -      -          -          -      -   метилацетат
4.530    -      -          -          -      -   этилацетат
4.633    BB      6.31234  2.17309e-4  1.37173e-3  метанол
4.896    BV      5.52898e-1  1.55215  8.58178e-1  2-пропанол
5.032    VB S    1.89805e5  2.09954e-4  39.85030    этанол
7.029    -      -          -          -      -   1-пропанол
8.740    -      -          -          -      -   изобутиловый спирт
11.026   -      -          -          -      -   1-бутанол
13.306   -      -          -          -      -   изоамиловый спирт

Totals :                               40.70985

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
    
```

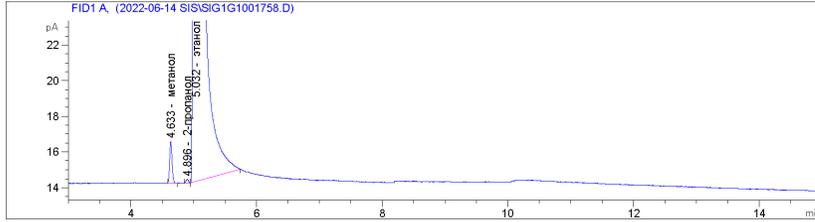
Instrument 1 20.06.2022 12:18:39 Page 1 of 2

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001758.D  
Sample Name: Moscoviya - 95

```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 101
Injection Date  : 14.06.2022 14:47:57 Inj : 1
                                           Inj Volume : 1 µl

Acq. Method    : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed   : 08.06.2022 14:22:28
Analysis Method : C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed   : 20.06.2022 13:18:05
                                           (modified after loading)
Method Info    : 25.06.2019 H2
    
```



FID1 A, (2022-06-14 SIS\SIG1G1001758.D)

```

=====
Internal Standard Report
=====
Sorted By      : Signal
Calib. Data Modified : 20 June 2022 r. 13:18:05
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Sample ISTD Information:
ISTD ISTD Amount Name
#   мп/л безво
-----
1   7.89270e5 этанол

Signal 1: FID1 A,

RetTime  Type  ISTD  Area      Amt/Area  Amount  Grp  Name
 [min]   [pA*s]  used  [pA*s]  ratio  мп/л безво
-----
3.467    1      -      -          -          -      -   ацетальдегид
4.059    1      -      -          -          -      -   метилацетат
4.530    1      -      -          -          -      -   этилацетат
4.633    BB      1      6.31234  1.41378e-4  3.71099e-3  метанол
4.896    BV      1      5.52898e-1  9.40935e-1  2.16333    2-пропанол
5.032    VB S I  1      1.89805e5  1.00000  7.89270e5    этанол
7.029    1      -      -          -          -      -   1-пропанол
8.740    1      -      -          -          -      -   изобутиловый спирт
11.026   1      -      -          -          -      -   1-бутанол
13.306   1      -      -          -          -      -   изоамиловый спирт

Instrument 1 20.06.2022 13:21:07 Page 1 of 2
    
```

# Метод внешнего стандарта

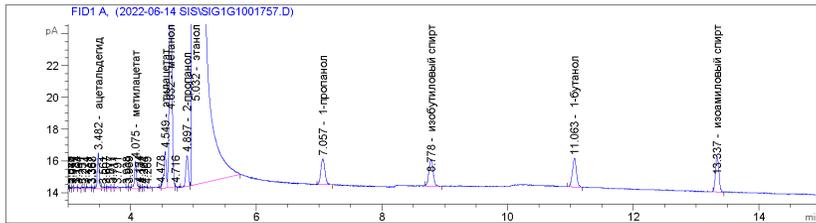
# PB-1

# Метод внутреннего стандарта

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001757.D  
Sample Name: pB

```

=====
Acq. Operator   :                               Location : Vial 101
Acq. Instrument : Instrument 1                  Inj       : 1
Injection Date  : 14.06.2022 14:17:06         Inj Volume: 1 µl
Acq. Method    : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed   : 08.06.2022 14:22:28
Analysis Method: C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed   : 08.06.2022 14:22:28
Method Info    : 25.06.2019 H2
    
```



## External Standard Report

```

Sorted By      : Signal
Calib. Data Modified : Wednesday, June 08, 2022 3:18:42 PM
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: FID1 A,

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [µg/DM3]	Grp	Name
3.482	VV	4.35420	2.61657	11.39307		ацетальдегид
4.075	BV	3.88449	2.93367	11.39581		метилацетат
4.549	VV	5.88779	1.65607	9.75057		этилацетат
4.632	VV	45.13608	2.35226e-4	1.06172e-2		метанол
4.897	VV	5.53714	1.55941	8.63470		2-пропанол
5.032	VB S	2.01908e5	2.09954e-4	42.39134		этанол
7.057	VB	7.37778	1.16767	8.61479		1-пропанол
8.778	BV	7.94120	1.04428	8.29284		изобутиловый спирт
11.063	BV	8.10547	1.03117	8.35812		1-бутанол
13.337	BV	8.35263	9.96234e-1	8.32117		изоамиловый спирт

Totals : 117.16302

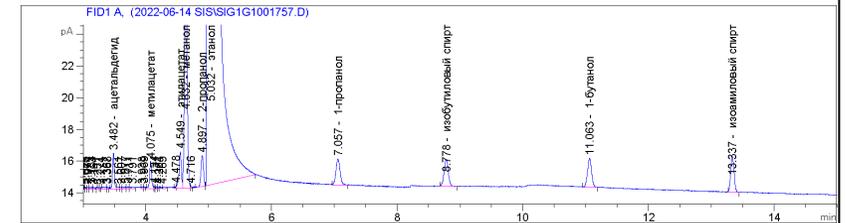
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

Data File C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001757.D  
Sample Name: pB

```

=====
Acq. Operator   :                               Location : Vial 101
Acq. Instrument : Instrument 1                  Inj       : 1
Injection Date  : 14.06.2022 14:17:06         Inj Volume: 1 µl
Acq. Method    : D:\CHEM32\1\METHODS\VODKA_2019.M
Last changed   : 08.06.2022 14:22:28
Analysis Method: C:\CHEM32\1\DATA\2022-06-14 SIS\SIG1G1001752.D\RUN.M
Last changed   : 20.06.2022 13:18:05
Method Info    : (modified after loading)
                : 25.06.2019 H2
    
```



## Internal Standard Report

```

Sorted By      : Signal
Calib. Data Modified : 20 June 2022 r. 13:18:05
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Sample ISTD Information:

ISTD #	ISTD Amount	Name
1	7.89270e5	этанол

Signal 1: FID1 A,

RetTime [min]	Type	ISTD used	Area [pA*s]	Amt/Area ratio	Amount µg/л безво	Grp	Name
3.482	VV	1	4.35420	1.56500	26.63756		ацетальдегид
4.075	BV	1	3.88449	1.76261	26.76465		метилацетат
4.549	VV	1	5.88779	9.93171e-1	22.85851		этилацетат
4.632	VV	1	45.13608	1.41378e-4	2.49447e-2		метанол
4.897	VV	1	5.53714	9.40935e-1	20.36654		2-пропанол
5.032	VB S I	1	2.01908e5	1.00000	7.89270e5		этанол
7.057	VB	1	7.37778	7.03202e-1	20.28048		1-пропанол
8.778	BV	1	7.94120	6.29313e-1	19.53552		изобутиловый спирт
11.063	BV	1	8.10547	6.20938e-1	19.67426		1-бутанол
13.337	BV	1	8.35263	5.98564e-1	19.54367		изоамиловый спирт

# Метод внешнего стандарта

# PВ-2

# Метод внутреннего стандарта

