



Distributed by

**MX526****Reference Material
Certificate of Analysis**

Product code : MX526M010ANAH
Batch n°: MX526B150923
Expiration date : September 23rd 2016
Storage : 4°C±4°C in the dark

Volume : 10*1,1ml
Solvent : Acetonitrile
Operator : FL

	Name	Purity %	CAS	Raw Material	Batch n°	Notified Concentration µg/ml
MX526-A2						
1	Azaconazole	99.7	60207-31-0	A046R150923	e	10.12±0.052
2	Benoxacor	98.0	98730-04-2	B004R150923	j	9.85±0.050
3	Bromopropylate	99.5	18181-80-1	B040R150923	f	9.96±0.051
4	Butralin	97.5	33629-47-9	B047R150923	e	10.02±0.051
5	Chlormephos	97.0	24934-91-6	C025R150923	f	9.48±0.048
6	Chlorpropham	99.5	101-21-3	C074R150923	i	10.26±0.052
7	Chlorthal dimethyl	99.0	1861-32-1	C077R150923	e	9.91±0.051
8	Cyprodinil	99.5	121552-61-2	C104R150923	j	10.10±0.052
9	Diflufenican	98.8	83164-33-4	D082R150923	i	9.90±0.050
10	Dimetilan	99.5	644-64-4	D205R150923	e	9.94±0.051
11	Furalaxyl	98.0	57646-30-7	F048R150923	f	9.85±0.050
12	Furathiocarb	98.0	65907-30-4	F049R150923	j	10.02±0.051
13	HCH epsilon	99.0	6108-10-7	H043R150923	d	10.00±0.051
MX526-B20.051						
14	Ametryne	97.0	834-12-8	A022R150923	f	9.96±0.051
15	Benalaxyl	96.5	71626-11-4	B001R150923	j	10.11±0.052
16	Bromophos ethyl	98.5	4824-78-6	B039R150923	i	10.05±0.051
17	Chlorfenvinphos	97.5	470-90-6	C023R150923	j	10.48±0.053
18	Diallate	97.0	2303-16-4	D147R150923	c	10.03±0.051
19	Diazinon	98.0	333-41-5	D022R150923	p	9.87±0.050
20	Dimethoate	99.0	60-51-5	D088R150923	j	10.28±0.052
21	Ethion	98.8	563-12-2	E025R150923	j	10.14±0.052
22	Ethofumesate	98.5	26225-79-6	E027R150923	i	10.00±0.051
23	Ethoprophos	93.1	13194-48-4	E028R150923	f	10.41±0.053
24	Fenarimol	99.0	60168-88-9	F003R150923	e	9.85±0.050
25	Fenchlorphos	99.5	299-84-3	F006R150923	f	9.80±0.050
26	Fluzilazole	98.0	85509-19-9	F043R150923	i	10.00±0.051

MX526-C2						
27	Alachlor	98.5	15972-60-8	A017R150923	k	10.38±0.053
28	Anthraquinone	99.0	84-65-1	A034R150923	y	10.00±0.051
29	Bromophos methyl	99.5	2104-96-3	B038R150923	j	10.29±0.052
30	Bromuconazole	98.8	116255-48-2	B042R150923	o	9.96±0.051
31	Bupirimate	99.5	41483-43-6	B043R150923	d	10.51±0.054
32	Buprofezin	99.0	69327-76-0	B044R150923	c	10.38±0.053
33	Carbofuran	98.5	1563-66-2	C011R150923	i	10.14±0.052
34	Chlordane-cis (alpha)	99.7	5103-71-9	C019R150923	z	10.28±0.052
35	Clomazone	94.5	81777-89-1	C084R150923	h	10.33±0.053
36	Dichlofenthion	98.5	97-17-6	D033R150923	i	10.10±0.052
37	Dimetachlor	98.0	50563-36-5	D086R150923	f	10.31±0.053
38	Fenpropimorph	92.5	67564-91-4	F014R150923	k	10.00±0.051
39	Thiobencarb	98.0	28249-77-6	T125R150923	d	9.91±0.051
MX526-D2						
40	Benfluralin	99.0	1861-40-1	B071R150923	h	10.23±0.052
41	Bifenthrine	95.0	82657-04-3	B027R150923	p	9.62±0.049
42	Carfentrazone ethyl	98.5	128639-02-1	C127R150923	n	10.01±0.051
43	Dichlorobenzamide-2,6	97.0	2008-58-4	D036R150923	i	10.16±0.052
44	Diclofop methyl	98.0	51338-27-3	D070R150923	h	10.30±0.053
45	Dimethenamid	98.0	87674-68-8	D087R150923	h	9.95±0.051
46	Fenthion	97.3	55-38-9	F017R150923	j	10.16±0.052
47	Fluazifop butyl	99.0	69806-50-4	F026R150923	g	10.21±0.052
48	Fluquinconazole	98.5	136426-54-5	F037R150923	g	10.21±0.052
49	Flurochloridone	98.5	61213-25-0	F038R150923	g	10.32±0.053
50	Flurprimidol	99.0	56425-91-3	F062R150923	c	10.15±0.052
51	Fonofos	95.5	944-22-9	F045R150923	f	10.33±0.053
52	Heptenophos	99.0	23560-59-0	H016R150923	k	10.02±0.051
	Acetonitrile	99.9	75-05-8	A052		

Analytical Data HPLC-DAD-MS: <input checked="" type="checkbox"/> GC-FID: <input type="checkbox"/>	Security data of the solvent:  F Flammable Xn Harmful Xi Irritating H : 225 302+312+332 319 P : 210 280 305+351+338
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Analysis: Within the framework of the preparation of this mixture all first solutions used were controlled (as far as their detection). Their quality and their concentration were then validated.

The mixture has been controlled too. The chromatogram (not optimized) is showed below. The attribution of peaks is given as a rough guide by stepping of the various scientific information which we have for every product (relative time of retention, profile UV-DAD, mass spectra).

In the aim to be analyzed in the best conditions, the mix is made in 4 parts: a first Mix named MX526-A with 13 compounds , a second Mix named MX526-B with 13 compounds, a third Mix named MX526-C with 13 compounds and a fourth Mix named MX526-D with 13 compounds. After checking the quality of

all mixes, they are merged to obtain the Mix named MX526.


MX526-A2: On the chromatogram all compounds are identified except HCH epsilon.

MX526-B2: On the chromatogram all compounds are identified.

MX526-C2: On the chromatogram all compounds are identified except Fenpropimorph.

MX526-D2: On the chromatogram all compounds are identified.

You can find below the 4 chromatograms.

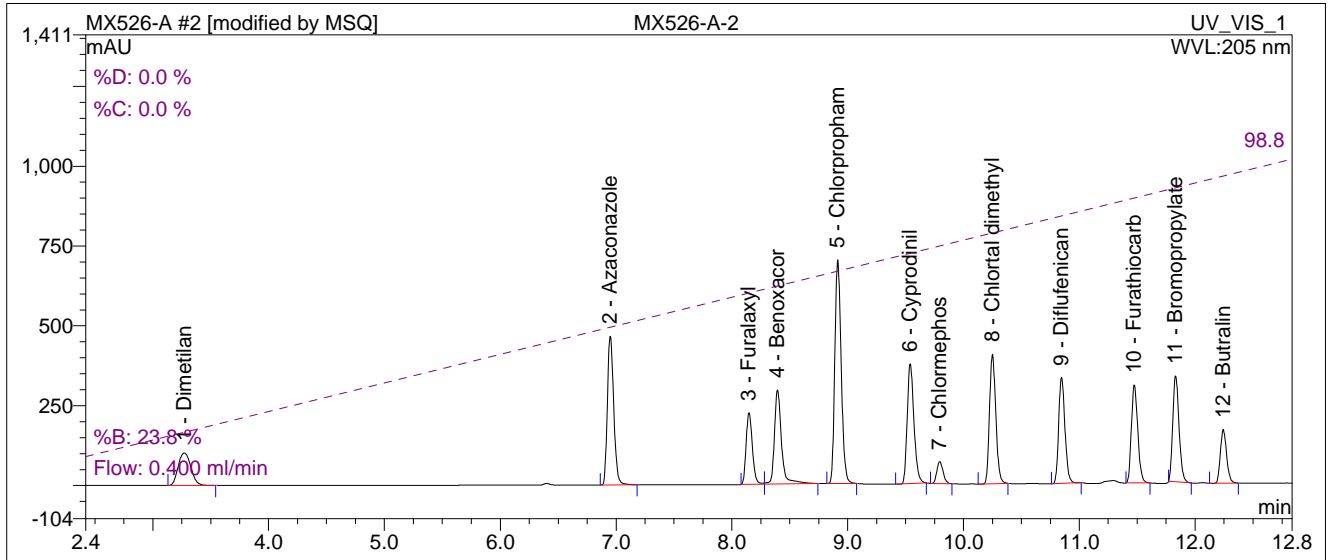
A2S is a brand of Analytical Standard Solutions company distributed by		Signature Miss RAYMOND Q.C. Manager
	Edition Date September 23rd 2015	

SPECIMEN

GENERAL & QUALITY INFORMATION

- 1- **Quality Documentation:** This certificate is designed in accordance with ISO Guide 31 (Reference Materials – Contents of Certificates and labels) and ISO Guide 35 (Reference Materials - General and Statistical Principal for Certification).
- 2- **Quality Standards:**
ISO 9001: 2008 Quality Management System – Requirements AFNOR
Certification Number N°2012/51356.1. 
- 3- **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compound listed on the first page. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11. For neat products quantities sold are integrate in a range between the quantity request and 5% more. If dilution is required, use only Class A glassware and diluents compatible with all certified analytes in this preparation. All solutions should be thoroughly mixed prior to use.
- 4- **Raw Materials:** Reference standards are prepared from the highest quality starting materials with defined purities. All analytes and solvents are obtained from pre-qualified vendors and then analyzed or evaluated prior to use.
- 5- **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. NIST Test number: EM14936. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of RM.
- 6- **Homogeneity Assessment:** Homogeneity of the finished product is assessed by analyzing sample batches or by other method consistent with the intended use of the product and by procedures that comply with the appropriate Quality System requirements, and ISO Guide 35 §7.
- 7- **Stability Assessment:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and store according to the conditions stated on the label. To ensure a uniform solution, mix the contents of the sealed container thoroughly prior to use. Care should be taken not to contaminate the contents of the original container.
- 8- **Analytical Quality Control:** Products are tested by validated analytical methods specified in the manufacturer's quality system.
- 9- **Uncertainty Statistics and Confidence Limits:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide (Quantifying Uncertainty in Analytical Measurement) Ed.2. We have defined two type of uncertainties: First a "gravimetric" uncertainty named U_g evaluated both Type A (based on series of observations) and Type B (manufacturers specification and calibration data) factors and report a combined expanded uncertainty equal to the positive square root of the total variance of uncertainty of the components using the following formula: $U_g = \sqrt{u_{pésée}^2 \text{ or } u_{pipettes}^2}$. Second, an "total" uncertainty named U_t report a combined expanded uncertainty equal to the positive square root of the total variance of gravimetric uncertainty and analyses uncertainty using the following formula: $u_{total} = \sqrt{u_{pésée}^2 + 2u_{ip}^2 + u_{ana}^2 + Xu_{p5000}^2}$. The expanded uncertainty U, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level. Laboratories accredited to ISO/IEC 17025 and ISO Guide 34 is required to estimate uncertainty budgets associated with the measurements they make. However, for analysis, the certified value should be used as actual value.
- 10- **Warranties:** The manufacturer warrants that its products shall conform to the description of such products as provided in its catalog or on the specific product label. This warranty is exclusive, and the manufacturer makes no other warranty, express or implied, including any implied warranty of merchantability of fitness for any particular purpose.
- 11- **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. Due to the hazardous nature, only trained personnel should handle this product. The company's liability will be limited to the replacement of the product or refund of purchase price. Notice of claims must be made within thirty (30) days from the date of delivery.

Analytical data



Chromatographic information:

HPLC-M: ThermoFisher Scientific Ultimate 3000, DAD, MSQPlus

Column: Accucore C18 100*2.1

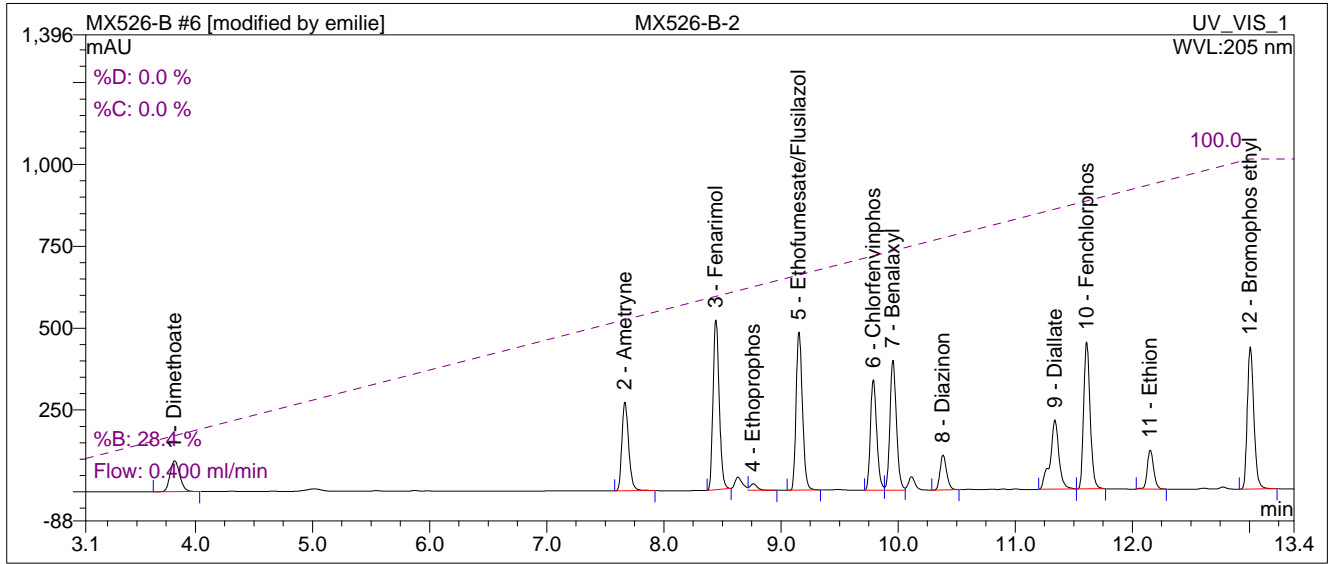
Gradient ramp: H2O/ACN 10 to 100% ACN in 12,50min

Flow: 0.4ml/min

No.	Ret.Time min	Peak Name	Lot 1	Lot 2 Customer
			Area mAU*min	Area mAU*min
1	3.31	Dimetilan	13.098	12.952
2	6.96	Azaconazole	28.459	29.147
3	8.15	Furalaxyl	13.999	13.597
4	8.40	Benoxacor	21.338	20.6926
5	8.92	Chlorpropham	42.15	44.369
6	9.54	Cyprodinil	24.682	25.188
7	9.79	Chlormephos	4.703	4.2346
8	10.25	Chlortal dimethyl	26	25.531
9	10.84	Diflufenican	21.034	20.631
10	11.47	Furathiocarb	19.471	19.541
11	11.83	Bromopropylate	21.075	20.891
12	12.24	Butralin	10.466	10.507

In accordance with our ISO9001:2008 Certification and in the way to assure the best quality of our custom made mixes, we include in this certificate the areas of chromatographic pic results coming from the synthesis of two different batches of this mix.

Analytical data



Chromatographic information:

HPLC-M: ThermoFisher Scientific Ultimate 3000, DAD, MSQPlus

Column: Accucore C18 100*2.1

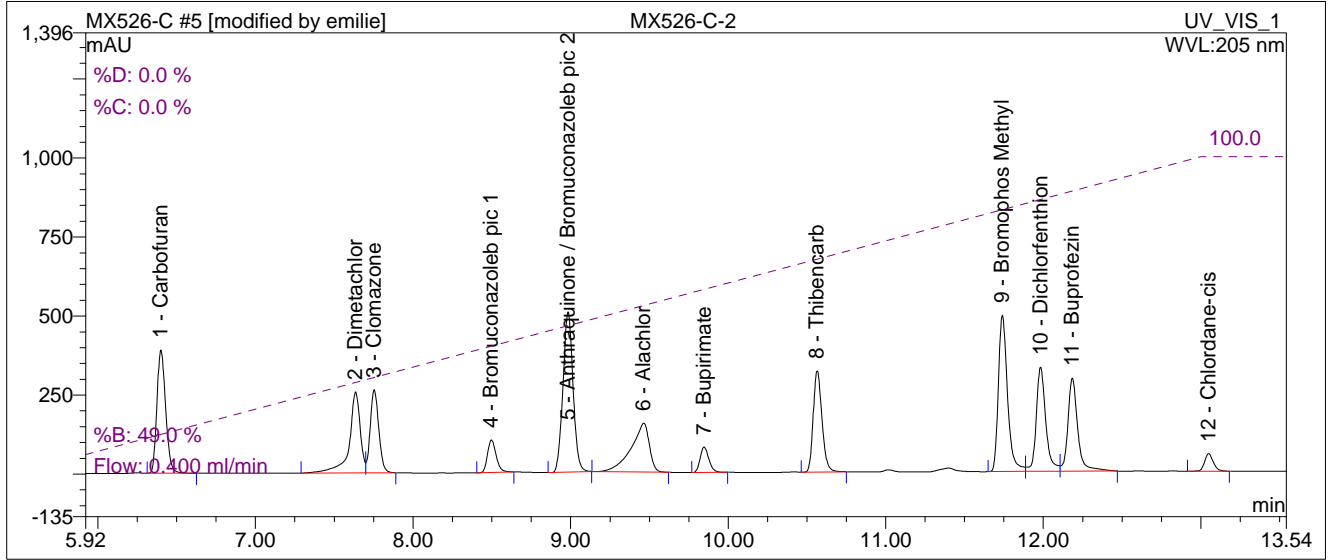
Gradient ramp: H2O/ACN 10 to 100% ACN in 12,50min

Flow: 0.4ml/min

No.	Ret.Time min	Peak Name	Lot 1	Lot 2 Customer
			Area mAU*min	Area mAU*min
1	3.81	Dimethoate	8.484	8.974
2	7.66	Ametryne	18.224	18.082
3	8.44	Fenarimol	32.728	31.776
4	8.76	Ethoprophos	1.28	1.389
5	9.14	Ethofumesate/Flusilazol	28.932	30.111
6	9.78	Chlorfenvinphos	19.134	21.046
7	9.95	Benalaxyl	24.83	25.395
8	10.38	Diazinon	7.038	6.853
9	11.33	Diallate	18.289	18.406
10	11.60	Fenchlorphos	29.882	28.72
11	12.15	Ethion	7.277	7.479
12	13.00	Bromophos ethyl	27.705	27.96

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HPLC-M: ThermoFisher Scientific Ultimate 3000, DAD, MSQPlus

Column: Accucore C18 100*2.1

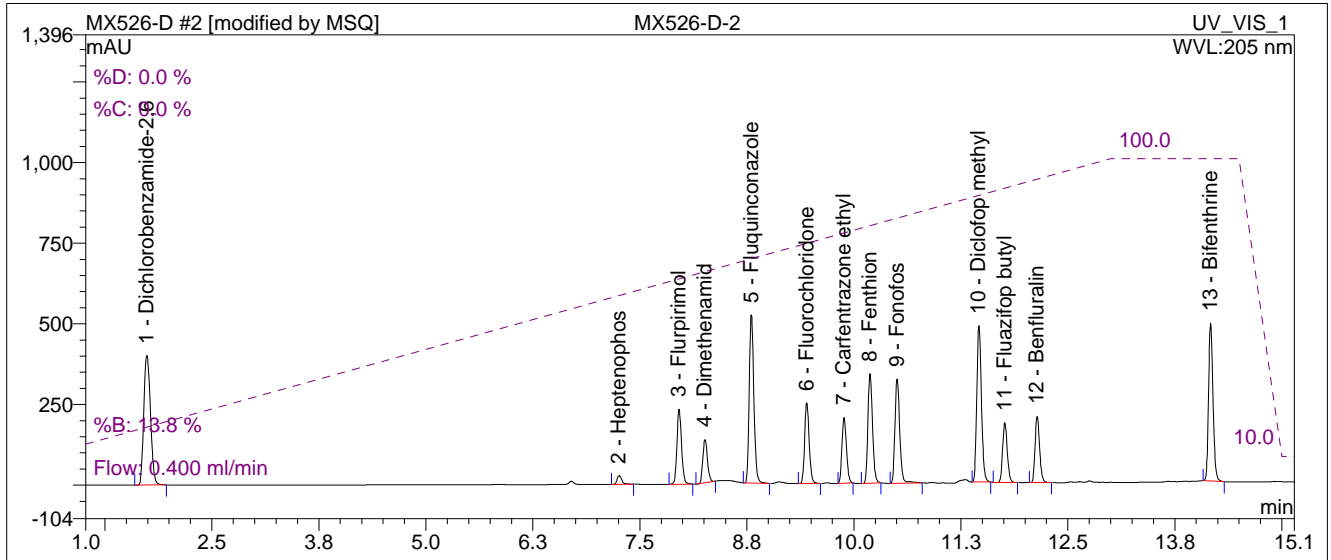
Gradient ramp: H2O/ACN 10 to 100% ACN in 12,50min

Flow: 0.4ml/min

No.	Ret.Time min	Peak Name	Lot 1	Lot 2 Customer
			Area mAU*min	Area mAU*min
1	6.39	Carbofuran	24.017	24.683
2	7.63	Dimetachlor	19.517	20.754
3	7.75	Clomazone	15.443	16.508
4	8.49	Bromuconazole pic 1	10.828	10.746
5	8.97	Anthraquinone / Bromuconazole pic 2	39.87	37.208
6	9.45	Alachlor	19.043	20.557
7	9.84	Bupirimate	4.584	5.075
8	10.56	Thibencarb	21.082	20.694
9	11.74	Bromophos Methyl	30.033	31.854
10	11.98	Dichlorfenthion	20.633	21.064
11	12.18	Buprofezin	21.424	23.118
12	13.05	Chlordane-cis	3.211	3.395

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Analytical data



Chromatographic information:

HPLC-M: ThermoFisher Scientific Ultimate 3000, DAD, MSQPlus

Column: Accucore C18 100*2.1

Gradient ramp: H2O/ACN 10 to 100% ACN in 12,50min

Flow: 0.4ml/min

No.	Ret.Time min	Peak Name	Lot 1	Lot 2 Customer
			Area mAU*min	Area mAU*min
1	1.74	Dichlorobenzamide-2,6	35.263	36.419
2	7.25	Heptenophos	1.659	1.666
3	7.95	Flurpirimol	14.069	14.484
4	8.25	Dimethenamid	8.382	8.295
5	8.80	Fluquinconazole	31.133	32.48
6	9.45	Fluorochloridone	14.447	15.39
7	9.89	Carfentrazone ethyl	12.507	12.54
8	10.19	Fenthion	20.292	20.949
9	10.51	Fonofos	19.616	20.96
10	11.47	Diclofop methyl	28.62	30.399
11	11.77	Fluazifop butyl	11.043	11.516
12	12.15	Benfluralin	12.056	12.634
13	14.18	Bifenthrine	31.775	29.467

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