



# **Sub-Group Agrochemical Analysis (AA) (1972)**

**CORESTA AP2017**

**Santa Cruz do Sul, Brazil**

**23<sup>rd</sup> October 2017**



## AA SG – Objectives

- ❖ To perform regular proficiency testing of Multi-Residue Methods for the analysis of agrochemical residues on tobacco.
- ❖ To undertake joint experiments to resolve unanswered questions arising from proficiency tests; to expand knowledge base on agrochemical residues and their analysis.
- ❖ To produce and maintain a series of Technical Notes (on different agrochemical residue classes and selected individual compounds) to supplement the Technical Guideline and aid method development and improvement.



# AA SG – Governance

## Coordinator

- Masahiro Miyoshi – JT Leaf Tobacco Research Center, Oyama, Japan

## Secretary

- Heather Westberg – Global Laboratory Services, Wilson – NC, USA

## Liaison

- Keisuke Nakayama – JT Scientific & Regulatory Affairs Division, Tokyo, Japan

**AA SG moved from Product Technology into Agronomy & Leaf Integrity Study Group**



## AA SG – Activities

### Proficiency test 2017 (FAPAS FT0113)

- CPAs defined in CORESTA Guide No.1 and its candidates
- Test materials (artificially spiked and agronomically incurred)
  - 17 CPAs spiked on blank tobacco
  - 12 CPAs in incurred tobacco
- 27 laboratories from 19 countries
- z-score evaluation
- FAPAS Report (May 2017)
- Analytical methods from the laboratories included in the FAPAS Report



# **AA SG – Activities**

## Proficiency test 2017 (FAPAS FT0113) – spiked sample

Laboratory Number	2,4-D	Azoxystrobin	Bifenthrin	Cyproconazole	Chlorantraniliprole	Chlorfenapyr	Dimethomorph (sum)	Ethibendazole	Indoxacarb (sum)	Iprodione (sum)	Iprodione	Iprodione	Iprodione	Iprodione (sum)	Methomyl+Thiodicarb (sum)	Methomyl	Thiodicarb	Permethrin (sum)	Profenofos	Propanocarb	Spirotetramat	Spiridonam	BYT081330-ene	BYT081330-ketohydroxy	Tefubenzuron	Total $ z $ & $z$ -score		
																											N of  z  > 2	%  z  > 2
1	-0.2	0.7	0.2	-2.1	0.8	0.8	0.7	-7.5	0.4	-0.3	-5.5	-4.5	0.0	-2.8	na	0.9	-0.2	0.4	-0.6	na	8.6	0.1	0.0	1.2	22	16	73	
2	-0.1	0.2	0.0	0.8	0.9	1.1	1.2	0.4	0.7	0.6	0.6	-4.5	0.3	0.8	na	0.9	0.2	0.5	3.0	na	-2.7	1.0	6.5	0.6	22	18	82	
3	-4.5	-0.5	0.5	0.0	0.6		0.8	1.7	2.1		-0.6		2.2	-2.9	na	0.4	-0.2	-1.0	0.9	na	-1.8	-4.9	5.3	-1.1	19	13	68	
4	-0.1	0.1	3.3	3.4	-0.4	1.9	0.5	0.3	-0.1	-0.1	-0.4	-0.4	-0.3	na	-0.4	1.4	-0.5	-0.9		-2.6		0.5	18	15	83			
5	-4.5	0.1	-0.3	0.3	-1.0	1.0	0.8	0.4	0.6	0.5	0.6	0.6	0.6	na	-1.5	-0.8	-0.6	-2.0						15	14	93		
6	-0.4	0.2	4.2	0.8	3.2	4.4	2.5	-1.2	0.3	1.2	0.7	0.3	-0.2	0.8	na	1.3	1.1	0.5	-1.3	na	-1.3	17.3	4.2	-6.1	22	15	68	
7	0.3	-0.2	-1.2	-2.3	-1.0	-1.9	-0.5	0.5	-1.9	-1.3	-1.3	-0.9	-0.9	-0.2	na	-1.1	-1.6	-0.9	0.2	na	-1.3	2.2	-0.8	0.4	21	19	90	
8	6.1			0.4	1.4					3.8	5.0		1.0	na	0.6	5.3	0.4	1.0						10	6	60		
9	-4.2	1.1				-2.8	-2.8								na	-0.9									5	2	40	
10	1.3	1.4	-0.7	0.6	1.4	2.1	0.8	1.3		0.7	0.2	0.0	-1.4	1.3	na	1.5	0.0	0.5	3.2	na	11.7	-0.1	-0.8	0.6	21	18	86	
11	-4.5	-0.8	-0.8	-1.3	6.8	-0.5	-0.9	-1.0	-1.5	0.1	0.1	0.1	na	-1.2	-0.1	0.9	-6.7			6.7		0.3	17	13	76			
12	-4.5	-3.0	-2.2	-5.4	-3.6	-6.7	-1.7	0.9	-1.8	-5.5	-5.5	-4.5	-6.6	-9.3	na	-0.1	-5.3	-2.3	-4.5	na	9.7	-1.1	-0.3	-5.5	22	6	27	
13	0.7	2.0	-0.7	1.0	-7.8					0.0		8.0			na		0.7	-1.1							9	7	78	
14	1.8	0.5	1.5	0.2	0.7	0.4	-1.9	0.0	0.2		0.7				na	-0.4	0.5	0.0	0.1					0.6	16	16	100	
15	-0.3	-0.7	-0.2	7.6	-0.5	0.6	-0.1	0.1		-0.3		0.0	2.4		na	-1.0	-0.6	0.0	-6.7		0.2		-0.8	17	14	82		
16	-4.5	-1.8	-2.7	-3.5	-1.6	-9.7	-1.3	-1.1	-2.0	-1.6	-1.7		-0.8	na	-1.8	-4.3	1.8	-6.7	na	-0.2		-0.7	18	12	67			
17	-0.1	0.9	0.7	-0.3	-1.4	-1.2	-1.1	0.0		-3.2		-0.7	-3.8	na	-3.9	0.5		-3.2		211.8		3.7	16	10	63			
18																												
19	-1.8	1.0	2.2	1.1		0.9	0.5	0.1		0.4	0.1	8.3		na	9.4	0.9	0.5	-0.9					-0.3	15	12	80		
20	0.0	1.0	1.6	-1.8	0.0	-0.7	0.7	-0.3	-0.7	0.3	-0.1	0.0	0.0	0.0	na	0.0	0.6	2.8	-2.7	na	0.8	-1.6	0.6	-0.4	22	20	91	
21		-2.5	-2.8				-1.2			-1.3	-1.3				na		-3.6		-3.4					7	3	43		
22		1.6	-0.7	2.2	-2.6	-0.4	-3.1			-0.6					na		-1.7	-0.1			-3.7			11	7	64		
23	-1.2	0.0	-1.3	-0.8	-2.5	-0.5	0.7	-0.9	0.2	-0.1	-1.3	0.1	0.8		na	1.3	1.4	-1.8	0.8	na	-1.5	3.8	0.0	-0.3	21	19	90	
24	-4.5	-3.1	-1.6	-5.2	-3.4	-2.2	-1.6	-4.2	-3.1	-5.5	-5.5	-5.5	-2.3	29.8	na	25.8	-1.3	-2.3	0.1	na	14	-2.4	0.3	-3.3	21	6	29	
25	0.7	-0.9	-0.5	-1.8	0.0	0.2	na	-0.8	na	na	-1.4		-0.7	-3.9	na	4.0	-1.2	0.5	-0.6	na	7.9	-6.4	na	-4.7	17	12	71	
26	-4.0	-4.1	-2.5			-2.6		-2.0					-2.8	-5.2	na	0.7	-1.9	-1.3	2.8					-2.3	12	4	33	
27		-5.5	3.6	4.0	-7.7			-5.6							na		-2.6	4.5	-3.1						8	0	0	
Total number of z-scores	17	24	25	25	22	19	22	20	22	11	23	7	18	18		22	25	22	24		18	11	10	19	424			
Number of $ z  \leq 2$	10	19	17	15	14	14	17	17	18	9	17	4	14	9		17	20	19	13		9	5	7	13	297			
% $ z  \leq 2$	59	79	68	60	64	74	77	85	82	82	74	57	78	50		77	80	86	54		50	45	70	68	69			

[Green box] =  $|z| \leq 2$  [Red box] = not found  
[Yellow box] =  $|z| > 2$  [Grey box] = not tested for  
[Purple box] =  $<\text{LoQ}$  [underline] = for information only

na = non available x<sub>i</sub>x = z-score



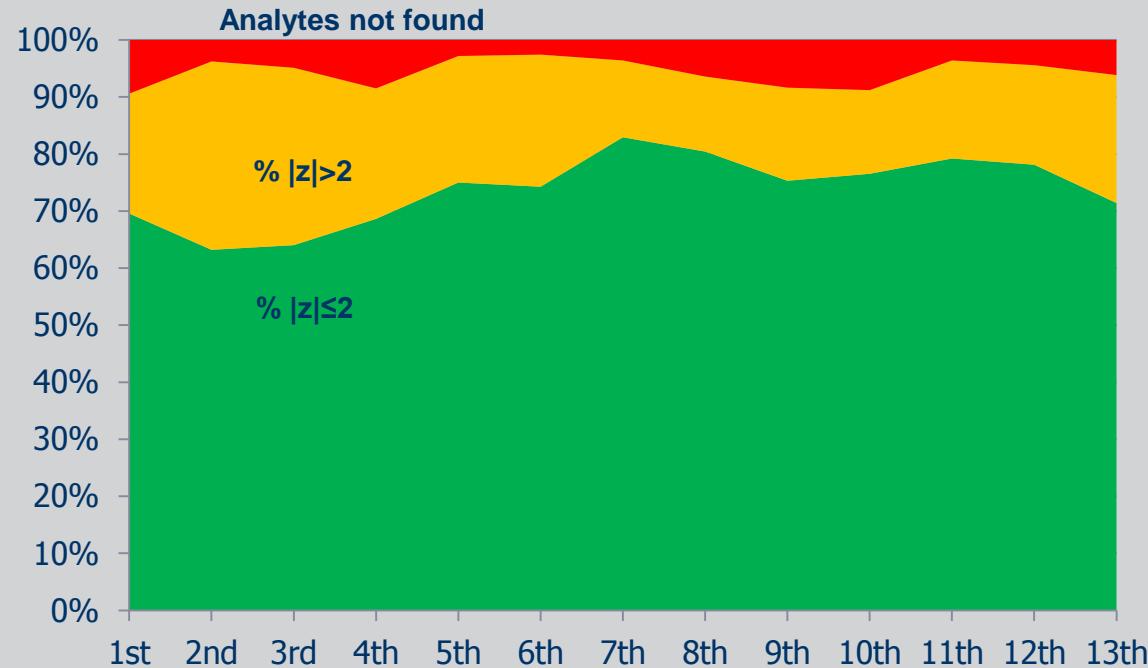
# AA SG – Activities

## Proficiency test 2017 (FAPAS FT0113) – incurred sample

Laboratory Number	Azoxystrobin	Bifenthrin	Clopyranilliprole	Clopyrifos (ethyl)	Ecthiandin	Dineophosph (sum)	Ethiocarbamates	Fuberidamide	Flumetralin	Indoxacarb	Propiconazole	Refuthenzuron	Thiamethoxam	Total n° of z-score	N° of  z ≤2	%  z ≤2
1	0.7	-0.6	0.7	4.5	-0.7	0.0	-5.3	1.6	-3.4	-0.1	-0.4	0.0	na	12	9	75
2	-0.3	-0.6	0.3	4.5	0.2	-1.3	-3.1	1.1	0.3	0.7	1.3	0.2	na	11	10	91
3	-0.7	-0.3	0.5	-0.6	-0.6	-0.2	-3.2	1.8	2.5	2.3	1.5	0.2	na	11	9	82
4	0.2	2.0	-0.3	-1.0	0.0	0.4	-3.2	0.2	0.7	0.2	-2.4	0.9	na	12	10	83
5	-0.2	-1.5	-1.0	-4.5	-0.5	1.4	-1.7	0.5	0.4	0.3	-1.8	na	11	10	91	
6	-0.3	4.1	1.2	-2.5	0.2	0.3	-0.3	0.8	0.8	0.8	1.0	-6.3	na	11	8	73
7	0.6	-0.1	-0.1	0.6	0.9	0.3	1.4	-1.0	-0.7	0.1	1.6	na	11	11	100	
8		2.0				0.2		4.6	7.6	0.1				5	3	60
9	-5.3	-1.1				-2.7	-3.6		-3.5				na	5	1	20
10	0.6	0.9	-1.0	-0.6		1.0	1.2	0.0	-1.3	0.5	1.1	-0.1	na	11	11	100
11	-0.9	-1.0	7.7	4.0	-4.5	-0.2	0.9	-0.6	-1.4	-0.5	-7.0	-0.2	na	12	8	67
12	-2.4	-1.9	-3.7	-4.5	-2.8	-0.3	-3.8	-1.0	-6.3	-1.6	-4.7	-3.6	na	12	4	33
13	2.1	0.5	-7.9	2.2	1.6			-0.8	0.3				na	7	4	57
14	-1.2	-1.0	0.7	0.6	1.1	0.0		-0.5	-1.1	0.3	-2.0	0.0	na	11	11	100
15	-1.6	-1.1	5.7	0.8	-4.5	-0.5	0.8	0.5	-1.0	0.8	-7.0	-1.0	na	12	9	75
16	0.9	0.2	-2.0		-4.5	-1.2	-1.6	1.2	-0.3	-0.3	-7.0	0.2	na	11	9	82
17	1.6	1.0	-0.5			-1.5	-7.4	-1.3		0.0	485.4	4.3	na	9	6	67
18																
19	0.6	1.2		1.2		0.5	2.1		0.3	0.2	0.1	-0.7	na	9	8	89
20	4.0	0.1	2.0	1.9	0.2	2.8	-0.9	-1.9	-3.5	-1.1	1.5	0.4	na	12	9	75
21		-2.3		-4.5		-1.4	-3.7		-1.3		-2.7		na	6	2	33
22	2.8	-4.1	-2.0	0.0	-2.0			-6.3	-0.2	0.9			na	8	5	63
23	-1.5	-0.9	-0.4	-1.0	-0.5	0.6	0.7	0.5	-2.1	-1.0	0.3	-0.8	na	12	11	92
24	3.8	-0.9	0.4	1.7	-4.5	-0.1	-0.2	4.1	-0.2	-2.0	-1.2	-2.9	na	12	8	67
25	0.7	-0.1	0.9	-0.3	-1.3	-0.5		1.4	-2.4	-2.4	0.6	-4.5	na	11	8	73
26	-4.9	-0.3		-0.6		-4.0	0.0		-2.0	-4.3		-1.0	na	8	4	50
27	-3.1	4.3	-7.3					-6.0	1.6	1.1			na	6	2	33
Total number of z-score	24	25	22	17	18	23	20	20	24	23	23	19		258		
Number of  z ≤2	16	20	17	11	12	20	12	18	16	18	16	14		190		
%  z ≤2	67	80	77	65	67	87	60	90	67	78	70	74		73.4		

|z|≤2 = |z|≤2  
|z|>2 = |z|>2  
not tested for = not tested for  
<LoQ = <LoQ  
for information only = for information only  
na = non available      xx = z-score

## z-score trend (FAPAS FT0101-FT0113)





# AA SG – Activities

## Communication at external event

- Participated in LAPRW 2017 (6<sup>th</sup> Latin American Pesticide Residue Workshop) in San Jose, Costa Rica
- A poster presentation entitled “Proficiency Testing for Pesticide Residues Analysis in Tobacco”, reviewing all previous rounds of proficiency test
- Some of the participants showed great interests in the proficiency test.

**Proficiency Testing for Pesticide Residues Analysis in Tobacco**

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**INTRODUCTION**  
 There is a growing demand for laboratories to demonstrate their performance and reliability in pesticide residue analysis. Proficiency Testing (PT) schemes provide an independent and unbiased assessment of performance. The Cooperation Centre for Scientific Research Relative to Tobacco (CORESTA) Agronomical Analysis Sub-Group (AA-SG) has been implementing a PT on pesticide residues analysis in tobacco test materials every year since 2005 in collaboration with Fapas from Fera Science Ltd, UK (Fapas), in order to evaluate the quality of an analytical laboratory's results.

**FLOW of CORESTA-Fapas PT**

Fapas prepares test materials  
 Conducting the proficiency testing of materials:  
 • After homogeneity test pass, Fapas sends test materials to each participant.  
 • Participants analyse test materials and return their own results.  
 • Fapas analyzes the submitted results statistically and makes a report.  
 • CORESTA AA-SG holds a meeting to discuss the outcome and makes recommendations for the next round of testing.

**Flow chart of CORESTA-Fapas PT**

**Table 1. Tested analyses with rate of satisfactory z-scores in CORESTA-Fapas PTs since 2005**

Tested material	PT No. 1	PT No. 2	PT No. 3	PT No. 4	PT No. 5	PT No. 6	PT No. 7	PT No. 8	PT No. 9	PT No. 10	PT No. 11	PT No. 12	PT No. 13	PT No. 14	PT No. 15	PT No. 16	PT No. 17	PT No. 18	PT No. 19	PT No. 20	PT No. 21	PT No. 22	PT No. 23	PT No. 24	PT No. 25	PT No. 26	PT No. 27	PT No. 28	PT No. 29	PT No. 30	PT No. 31	PT No. 32	PT No. 33	PT No. 34	PT No. 35	PT No. 36	PT No. 37	PT No. 38	PT No. 39	PT No. 40	PT No. 41	PT No. 42	PT No. 43	PT No. 44	PT No. 45	PT No. 46	PT No. 47	PT No. 48	PT No. 49	PT No. 50	PT No. 51	PT No. 52	PT No. 53	PT No. 54	PT No. 55	PT No. 56	PT No. 57	PT No. 58	PT No. 59	PT No. 60	PT No. 61	PT No. 62	PT No. 63	PT No. 64	PT No. 65	PT No. 66	PT No. 67	PT No. 68	PT No. 69	PT No. 70	PT No. 71	PT No. 72	PT No. 73	PT No. 74	PT No. 75	PT No. 76	PT No. 77	PT No. 78	PT No. 79	PT No. 80	PT No. 81	PT No. 82	PT No. 83	PT No. 84	PT No. 85	PT No. 86	PT No. 87	PT No. 88	PT No. 89	PT No. 90	PT No. 91	PT No. 92	PT No. 93	PT No. 94	PT No. 95	PT No. 96	PT No. 97	PT No. 98	PT No. 99	PT No. 100	PT No. 101	PT No. 102	PT No. 103	PT No. 104	PT No. 105	PT No. 106	PT No. 107	PT No. 108	PT No. 109	PT No. 110	PT No. 111	PT No. 112	PT No. 113	PT No. 114	PT No. 115	PT No. 116	PT No. 117	PT No. 118	PT No. 119	PT No. 120	PT No. 121	PT No. 122	PT No. 123	PT No. 124	PT No. 125	PT No. 126	PT No. 127	PT No. 128	PT No. 129	PT No. 130	PT No. 131	PT No. 132	PT No. 133	PT No. 134	PT No. 135	PT No. 136	PT No. 137	PT No. 138	PT No. 139	PT No. 140	PT No. 141	PT No. 142	PT No. 143	PT No. 144	PT No. 145	PT No. 146	PT No. 147	PT No. 148	PT No. 149	PT No. 150	PT No. 151	PT No. 152	PT No. 153	PT No. 154	PT No. 155	PT No. 156	PT No. 157	PT No. 158	PT No. 159	PT No. 160	PT No. 161	PT No. 162	PT No. 163	PT No. 164	PT No. 165	PT No. 166	PT No. 167	PT No. 168	PT No. 169	PT No. 170	PT No. 171	PT No. 172	PT No. 173	PT No. 174	PT No. 175	PT No. 176	PT No. 177	PT No. 178	PT No. 179	PT No. 180	PT No. 181	PT No. 182	PT No. 183	PT No. 184	PT No. 185	PT No. 186	PT No. 187	PT No. 188	PT No. 189	PT No. 190	PT No. 191	PT No. 192	PT No. 193	PT No. 194	PT No. 195	PT No. 196	PT No. 197	PT No. 198	PT No. 199	PT No. 200	PT No. 201	PT No. 202	PT No. 203	PT No. 204	PT No. 205	PT No. 206	PT No. 207	PT No. 208	PT No. 209	PT No. 210	PT No. 211	PT No. 212	PT No. 213	PT No. 214	PT No. 215	PT No. 216	PT No. 217	PT No. 218	PT No. 219	PT No. 220	PT No. 221	PT No. 222	PT No. 223	PT No. 224	PT No. 225	PT No. 226	PT No. 227	PT No. 228	PT No. 229	PT No. 230	PT No. 231	PT No. 232	PT No. 233	PT No. 234	PT No. 235	PT No. 236	PT No. 237	PT No. 238	PT No. 239	PT No. 240	PT No. 241	PT No. 242	PT No. 243	PT No. 244	PT No. 245	PT No. 246	PT No. 247	PT No. 248	PT No. 249	PT No. 250	PT No. 251	PT No. 252	PT No. 253	PT No. 254	PT No. 255	PT No. 256	PT No. 257	PT No. 258	PT No. 259	PT No. 260	PT No. 261	PT No. 262	PT No. 263	PT No. 264	PT No. 265	PT No. 266	PT No. 267	PT No. 268	PT No. 269	PT No. 270	PT No. 271	PT No. 272	PT No. 273	PT No. 274	PT No. 275	PT No. 276	PT No. 277	PT No. 278	PT No. 279	PT No. 280	PT No. 281	PT No. 282	PT No. 283	PT No. 284	PT No. 285	PT No. 286	PT No. 287	PT No. 288	PT No. 289	PT No. 290	PT No. 291	PT No. 292	PT No. 293	PT No. 294	PT No. 295	PT No. 296	PT No. 297	PT No. 298	PT No. 299	PT No. 300	PT No. 301	PT No. 302	PT No. 303	PT No. 304	PT No. 305	PT No. 306	PT No. 307	PT No. 308	PT No. 309	PT No. 310	PT No. 311	PT No. 312	PT No. 313	PT No. 314	PT No. 315	PT No. 316	PT No. 317	PT No. 318	PT No. 319	PT No. 320	PT No. 321	PT No. 322	PT No. 323	PT No. 324	PT No. 325	PT No. 326	PT No. 327	PT No. 328	PT No. 329	PT No. 330	PT No. 331	PT No. 332	PT No. 333	PT No. 334	PT No. 335	PT No. 336	PT No. 337	PT No. 338	PT No. 339	PT No. 340	PT No. 341	PT No. 342	PT No. 343	PT No. 344	PT No. 345	PT No. 346	PT No. 347	PT No. 348	PT No. 349	PT No. 350	PT No. 351	PT No. 352	PT No. 353	PT No. 354	PT No. 355	PT No. 356	PT No. 357	PT No. 358	PT No. 359	PT No. 360	PT No. 361	PT No. 362	PT No. 363	PT No. 364	PT No. 365	PT No. 366	PT No. 367	PT No. 368	PT No. 369	PT No. 370	PT No. 371	PT No. 372	PT No. 373	PT No. 374	PT No. 375	PT No. 376	PT No. 377	PT No. 378	PT No. 379	PT No. 380	PT No. 381	PT No. 382	PT No. 383	PT No. 384	PT No. 385	PT No. 386	PT No. 387	PT No. 388	PT No. 389	PT No. 390	PT No. 391	PT No. 392	PT No. 393	PT No. 394	PT No. 395	PT No. 396	PT No. 397	PT No. 398	PT No. 399	PT No. 400	PT No. 401	PT No. 402	PT No. 403	PT No. 404	PT No. 405	PT No. 406	PT No. 407	PT No. 408	PT No. 409	PT No. 410	PT No. 411	PT No. 412	PT No. 413	PT No. 414	PT No. 415	PT No. 416	PT No. 417	PT No. 418	PT No. 419	PT No. 420	PT No. 421	PT No. 422	PT No. 423	PT No. 424	PT No. 425	PT No. 426	PT No. 427	PT No. 428	PT No. 429	PT No. 430	PT No. 431	PT No. 432	PT No. 433	PT No. 434	PT No. 435	PT No. 436	PT No. 437	PT No. 438	PT No. 439	PT No. 440	PT No. 441	PT No. 442	PT No. 443	PT No. 444	PT No. 445	PT No. 446	PT No. 447	PT No. 448	PT No. 449	PT No. 450	PT No. 451	PT No. 452	PT No. 453	PT No. 454	PT No. 455	PT No. 456	PT No. 457	PT No. 458	PT No. 459	PT No. 460	PT No. 461	PT No. 462	PT No. 463	PT No. 464	PT No. 465	PT No. 466	PT No. 467	PT No. 468	PT No. 469	PT No. 470	PT No. 471	PT No. 472	PT No. 473	PT No. 474	PT No. 475	PT No. 476	PT No. 477	PT No. 478	PT No. 479	PT No. 480	PT No. 481	PT No. 482	PT No. 483	PT No. 484	PT No. 485	PT No. 486	PT No. 487	PT No. 488	PT No. 489	PT No. 490	PT No. 491	PT No. 492	PT No. 493	PT No. 494	PT No. 495	PT No. 496	PT No. 497	PT No. 498	PT No. 499	PT No. 500	PT No. 501	PT No. 502	PT No. 503	PT No. 504	PT No. 505	PT No. 506	PT No. 507	PT No. 508	PT No. 509	PT No. 510	PT No. 511	PT No. 512	PT No. 513	PT No. 514	PT No. 515	PT No. 516	PT No. 517	PT No. 518	PT No. 519	PT No. 520	PT No. 521	PT No. 522	PT No. 523	PT No. 524	PT No. 525	PT No. 526	PT No. 527	PT No. 528	PT No. 529	PT No. 530	PT No. 531	PT No. 532	PT No. 533	PT No. 534	PT No. 535	PT No. 536	PT No. 537	PT No. 538	PT No. 539	PT No. 540	PT No. 541	PT No. 542	PT No. 543	PT No. 544	PT No. 545	PT No. 546	PT No. 547	PT No. 548	PT No. 549	PT No. 550	PT No. 551	PT No. 552	PT No. 553	PT No. 554	PT No. 555	PT No. 556	PT No. 557	PT No. 558	PT No. 559	PT No. 560	PT No. 561	PT No. 562	PT No. 563	PT No. 564	PT No. 565	PT No. 566	PT No. 567	PT No. 568	PT No. 569	PT No. 570	PT No. 571	PT No. 572	PT No. 573	PT No. 574	PT No. 575	PT No. 576	PT No. 577	PT No. 578	PT No. 579	PT No. 580	PT No. 581	PT No. 582	PT No. 583	PT No. 584	PT No. 585	PT No. 586	PT No. 587	PT No. 588	PT No. 589	PT No. 590	PT No. 591	PT No. 592	PT No. 593	PT No. 594	PT No. 595	PT No. 596	PT No. 597	PT No. 598	PT No. 599	PT No. 600	PT No. 601	PT No. 602	PT No. 603	PT No. 604	PT No. 605	PT No. 606	PT No. 607	PT No. 608	PT No. 609	PT No. 610	PT No. 611	PT No. 612	PT No. 613	PT No. 614	PT No. 615	PT No. 616	PT No. 617	PT No. 618	PT No. 619	PT No. 620	PT No. 621	PT No. 622	PT No. 623	PT No. 624	PT No. 625	PT No. 626	PT No. 627	PT No. 628	PT No. 629	PT No. 630	PT No. 631	PT No. 632	PT No. 633	PT No. 634	PT No. 635	PT No. 636	PT No. 637	PT No. 638	PT No. 639	PT No. 640	PT No. 641	PT No. 642	PT No. 643	PT No. 644	PT No. 645	PT No. 646	PT No. 647	PT No. 648	PT No. 649	PT No. 650	PT No. 651	PT No. 652	PT No. 653	PT No. 654	PT No. 655	PT No. 656	PT No. 657	PT No. 658	PT No. 659	PT No. 660	PT No. 661	PT No. 662	PT No. 663	PT No. 664	PT No. 665	PT No. 666	PT No. 667	PT No. 668	PT No. 669	PT No. 670	PT No. 671	PT No. 672	PT No. 673	PT No. 674	PT No. 675	PT No. 676	PT No. 677	PT No. 678	PT No. 679	PT No. 680	PT No. 681	PT No. 682	PT No. 683	PT No. 684	PT No. 685	PT No. 686	PT No. 687	PT No. 688	PT No. 689	PT No. 690	PT No. 691	PT No. 692	PT No. 693	PT No. 694	PT No. 695	PT No. 696	PT No. 697	PT No. 698	PT No. 699	PT No. 700	PT No. 701	PT No. 702	PT No. 703	PT No. 704	PT No. 705	PT No. 706	PT No. 707	PT No. 708	PT No. 709	PT No. 710	PT No. 711	PT No. 712	PT No. 713	PT No. 714	PT No. 715	PT No. 716	PT No. 717	PT No. 718	PT No. 719	PT No. 720	PT No. 721	PT No. 722	PT No. 723	PT No. 724	PT No. 725	PT No. 726	PT No. 727	PT No. 728	PT No. 729	PT No. 730	PT No. 731	PT No. 732	PT No. 733	PT No. 734	PT No. 735	PT No. 736	PT No. 737	PT No. 738	PT No. 739	PT No. 740	PT No. 741	PT No. 742	PT No. 743	PT No. 744	PT No. 745	PT No. 746	PT No. 747	PT No. 748	PT No. 749	PT No. 750	PT No. 751	PT No. 752	PT No. 753	PT No. 754	PT No. 755	PT No. 756	PT No. 757	PT No. 758	PT No. 759	PT No. 760	PT No. 761	PT No. 762	PT No. 763	PT No. 764	PT No. 765	PT No. 766	PT No. 767	PT No. 768	PT No. 769	PT No. 770	PT No. 771	PT No. 772	PT No. 773	PT No. 774	PT No. 775	PT No. 776	PT No. 777	PT No. 778	PT No. 779	PT No. 780	PT No. 781	PT No. 782	PT No. 783	PT No. 784	PT No. 785	PT No. 786	PT No. 787	PT No. 788	PT No. 789	PT No. 790	PT No. 791	PT No. 792	PT No. 793	PT No. 794	PT No. 795	PT No. 796	PT No. 797	PT No. 798	PT No. 799	PT No. 800	PT No. 801	PT No. 802	PT No. 803	PT No. 804	PT No. 805	PT No. 806	PT No. 807	PT No. 808	PT No. 809	PT No. 810	PT No. 811	PT No. 812	PT No. 813	PT No. 814	PT No. 815	PT No. 816	PT No. 817	PT No. 818	PT No. 819	PT No. 820	PT No. 821	PT No. 822	PT No. 823	PT No. 824	PT No. 825	PT No. 826	PT No. 827	PT No. 828	PT No. 829	PT No. 830	PT No. 831	PT No. 832	PT No. 833	PT No. 834	PT No. 835	PT No. 836	PT No. 837	PT No. 838	PT No. 839	PT No. 840	PT No. 841	PT No. 842	PT No. 843	PT No. 844	PT No. 845	PT No. 846	PT No. 847	PT No. 848	PT No. 849	PT No. 850	PT No. 851	PT No. 852	PT No. 853	PT No. 854	PT No. 855	PT No. 856	PT No. 857	PT No. 858	PT No. 859	PT No. 860	PT No. 861	PT No. 862	PT No. 863	PT No. 864	PT No. 865	PT No. 866	PT No. 867	PT No. 868	PT No. 869	PT No. 870	PT No. 871	PT No. 872	PT No. 873	PT No. 874	PT No. 875	PT No. 876	PT No. 877	PT No. 878	PT No. 879	PT No. 880	PT No. 881	PT No. 882	PT No. 883	PT No. 884	PT No. 885	PT No. 886	PT No. 887	PT No. 888	PT No. 889	PT No. 890	PT No. 891	PT No. 892	PT No. 893	PT No. 894	PT No. 895	PT No. 896	PT No. 897	PT No. 898	PT No. 899	PT No. 900	PT No. 901	PT No. 902	PT No. 903	PT No. 904	PT No. 905	PT No. 906	PT No. 907	PT No. 908	PT No. 909	PT No. 910	PT No. 911	PT No. 912	PT No. 913	PT No. 914	PT No. 915	PT No. 916	PT No. 917	PT No. 918	PT No. 919	PT No. 920	PT No. 921	PT No. 922	PT No. 923	PT No. 924	PT No. 925	PT No. 926	PT No. 927	PT No. 928	PT No. 929	PT No. 930	PT No. 931	PT No. 932	PT No. 933	PT No. 934	PT No. 935	PT No. 936	PT No. 937	PT No. 938	PT No. 939	PT No. 940	PT No. 941	PT No. 942	PT No. 943	PT No. 944	PT No. 945	PT No. 946	PT No. 947	PT No. 948	PT No. 949	PT No. 950	PT No. 951	PT No. 952	PT No. 953	PT No. 954	PT No. 955	PT No. 956	PT No. 957	PT No. 958	PT No. 959	PT No. 960	PT No. 961	PT No. 962	PT No. 963	PT No. 964	PT No. 965	PT No. 966	PT No. 967	PT No. 968	PT No. 969	PT No. 970	PT No. 971	PT No. 972	PT No. 973	PT No. 974
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# AA SG – Activities

## Joint Experiment Technical Study (JETS) 17/1 on Maleic Hydrazide

- **Coordinator:** Alvino Rodrigues (Souza Cruz)
- **Background:**
  - The ISO 4876:1980 (Tobacco and tobacco products -Determination of maleic hydrazide residues) was systematically reviewed in 2011. Two revision proposals were submitted to the ISO/TC 126 from that time.
  - The JETS 16/2 was formulated to evaluate the capacity of different methods; the ISO+ISO modified; Renaud modified, YC/T modified and other methods.
  - Results from the YC/T modified method were comparable to ISO+ISO modified, although the limited number of labs applying the same method weakens the statistical analysis in achieving conclusive findings.
- **Objective:**
  - To evaluate the YC/T modified and ISO methods performance to quantitate maleic hydrazide on tobacco, using both artificially spiked and naturally incurred tobacco samples



## AA SG – Activities

### Joint Experiment Technical Study (JETS) 17/1 on Maleic Hydrazide (cont'd)

- Six test samples (one artificially spiked and five naturally incurred Flue-cured)
- 17 laboratories from 11 countries
- Report issued in August 2017
- Outcome:
  - The report concluded the YC/T modified method was not able to provide equivalent results to the reference method (the ISO 4876:1980) in the six evaluated samples.
  - However, another statistical evaluation indicated the differences between YC/T modified method and ISO method seemed not-significant for most of the samples.
- Next step:
  - Consult with CORESTA experts on the statistical approach for similar studies conducted by other SG and TF
  - Compare the methods to collect information related with sample throughput, cost, environmental impact, etc.



## AA SG – Activities

### Technical Guideline (CORESTA Guide No. 5)

- **Technical Guideline for Pesticide Residues Analysis on Tobacco and Tobacco Products → to be reviewed by 2018**

### Technical Note

- **Technical Note #006 (Dithiocarbamates) to be completed**
- **New Technical notes under consideration**

### Joint Experiment Test Study on matrix effects from DAC tobaccos

- **Study design to be considered**





# Thank you for attention!