



Naktuinbouw Laboratories Price list 2021

Information about the price list and instructions

Basic fee 2021

A basic fee will be charged per assignment. The basic fee is € 26,- and € 0,36 per sample. For assignments via mijnNaktuinbouw, the basic fee is € 15,60 and the sample fee is € 0,36 per sample.

- * Assignments for plant material: Samples of the same crop are jointly registered in one assignment. The basic fee will be charged once.
- * Assignments for seeds and soil: Each sample is registered as a separate assignment. The basic fee is charged per sample.

General instructions on submitting samples

- * The material must be packaged in plastic and the packaging must be sealed properly. Send the sample in a sturdy box. Secure the submission form in the parcel.
- * Liquid samples must be submitted in vapour-tight packaging.
- * For shipments from outside the European Union we have a sticker available to send samples without a phytosanitary certificate. For inquiries please contact our lab administration. (laboratory@naktuinbouw.com).
- * Submission forms for the different types of orders can be found at our website, they can also be requested at the administration (laboratory@naktuinbouw.com)
- * If you state on your shipment that it is URGENT and has to be given priority, the sample will be prepared and tested as soon as possible. An extra urgency fee will apply.

myNaktuinbouw

Requests for seed analysis, seed health testing and nematode testing, can be submitted electronically through myNaktuinbouw. You enter the data of the sample and select the appropriate tests. Subsequently, the sample can be sent to Naktuinbouw. When results of the tests are ready, they are available at myNaktuinbouw. You will receive the certificates as you're used to. More information can be found on www.naktuinbouw.com or feel free to contact us via: mijn@naktuinbouw.nl.

Additional instructions

Submitting seeds

- * Seed tests have been developed and validated for untreated seeds. Since the reliability of health tests may be affected if seeds have been treated, submitted seed samples should preferably be untreated. This does not apply for tests where it is stated that it can be applied on treated seeds.
- * If seeds have been disinfected, coated or pilled, please inform us accordingly for the sake of the safety of our employees and possible influence on test results.

Submitting plant material

- * Make sure your plantmaterial is at our laboratory before or on the Wednesday prior to the test week as we are closed in the weekends; material received on Friday can't be proceeded.
- * If you have more questions about sampling, please contact our account manager (laboratory@naktuinbouw.com)

Submitting material for diagnostic testing

- * Pack roots and leaves in such a way that leaves cannot be polluted by soil, e.g. by wrapping the roots in a separate plastic bag and sealing it with a elastic band around the stems.
- * Send a whole plant if possible. Leaf symptoms may be caused by root problems.
- * If needed you can send pictures to diagnostiek@naktuibouw.nl

Submitting material to make it free from viruses

- * Special conditions apply to the submission of material which has to be made free from viruses. You can obtain more information at Naktuinbouw Test Center in Horst (Netherlands); testcenter@naktuinbouw.com or by phone on +31 77 398 59 19.

Contact with Naktuinbouw Laboratories

Contacting Naktuinbouw Laboratories

You can contact the Laboratory Administration directly for any questions and assignments.

Administration +31 71 332 61 50
Planning +31 71 332 62 40
e-mail laboratory@naktuinbouw.com

Shipping address for all samples

Naktuinbouw
attn. Administration Laboratories
P.O. Box 40
2370 AA Roelofarendsveen
The Netherlands

Delivery address for courier services

Naktuinbouw
attn. Administration Laboratories
Sotaweg 22
2371 GD Roelofarendsveen
The Netherlands

For specific diagnostic enquiries please call (071) 332 62 55 or email diagnostiek@naktuinbouw.nl

If you have any specific laboratory questions regarding diseases in fruit crops, arboricultural crops or strawberries, contact Test Center Horst:

Tel. +31 77 398 59 19
e-mail testcenter@naktuinbouw.com

Terms and conditions of delivery and disclaimer

The General Terms and Conditions of Naktuinbouw apply to all services provided by the Naktuinbouw Laboratories (registered with the Chamber of Commerce and Industry for Rijnland in Leiden, the Netherlands, under no. 41150707). You can find on our website: www.naktuinbouw.com/terms-and-conditions

All amounts stated are excluding VAT. Changes to rates are reserved.

If testing / diagnosis is not carried out by Naktuinbouw but, after having consulted the client, is subcontracted to a third party, the corresponding costs will be charged to the client.

If you state on your package that it concerns an URGENT assignment, an urgency rate will be apply.

Diagnostic samples are always priority; an extra urgency rate will apply.

Additional testing may be required if a possible pathogen is found. Extra costs for confirmation testing will be charged

The results of tests or assessments provided by Naktuinbouw Laboratories only relate to the actual sample tested and not to the lot concerned, unless Naktuinbouw states otherwise.

Diagnostics

Diagnostics brings the practice of horticulture, the diagnosticians and the researchers of Naktuinbouw Laboratories together. Annually about 250 different crops from numerous countries are studied. The wide experience makes Diagnostics a good partner for reliable diagnoses of diseases, pests and cultivation problems. Please note that our Diagnostics team only performs tests on material with symptoms.

Composition of the test fee

Our Diagnostics Team works with a fixed fee. The advantage for the person submitting samples is that the costs of diagnostic testing are known in advance. Assignments are immediately processed. And savings can also be made on the handling and administrative costs, which will help keep the fees down. The fees below are including the urgency fee. Our Diagnostic Laboratory can handle virus tests for limited-scope diagnosis such as TSWV, INSV and PepMV rather quickly and the applicant can have the test result usually within one day. If necessary, found organisms can be further identified with the help of molecular techniques. We have seen that there is demand for having samples tested for certain viruses fast. This often concerns TSWV, INSV, and PepMV. Naktuinbouw has the facilities to enable such limited-scope diagnoses to be carried out rapidly, so that the person submitting the sample will often get the results within one day.

Fees for diagnosis

	Method	Fee
Standard diagnosis, first sample	Depending on disease	€ 247,90
Each additional sample		€ 115,30
Limited diagnosis, first sample (usually visual or microscopic assessment)	Visual or other limited research	€ 193,80
Each additional sample		€ 115,30
Testing for up to 5 viruses, first sample	ELISA	€ 132,60
Each additional sample		€ 61,20
Testing for up to 10 viruses, first sample	ELISA	€ 157,60
Each additional sample		€ 84,00
PCR testing per sample ⁴	PCR	€ 110,20
Fee per hour for additional work (if needed)		€ 144,20
Verification test (if applicable)		€ 38,40

	Method	Basic test	IF/ microscope/ agglutination	Confirmation PCR
<i>Erwinia amylovora</i>	Culture	€ 171,40	€ 48,20	€ 64,00
<i>Phytophthora fragariae</i>	Visual determination	€ 153,00		
<i>Xanthomonas arboricola pv. pruni</i>	Culture	€ 187,70		€ 108,10
<i>Xanthomonas fragariae</i>	Culture	€ 141,80		€ 108,10

- * The fee for any succeeding additional sample only applies to samples of the same assignment and same crop.
- * If an assignment is clearly so extensive that additional costs must be incurred it cannot possibly be done for these fees, we will contact you in advance.
- * Extra costs for additional services provided, such as sampling or transport, will be charged invoiced.

⁴ An extra PCR test is carried out when final identification of a pathogen is needed.

Testing for Nematodes

Nematodes can seriously harm crops. Preventative testing of the soil, seeds and plant material can prevent this. Naktuinbouw offers testing for various plant-parasitic nematodes which may harm your crops. For example, the presence of *Xiphinema* and *Longidorus* species in soil may be demonstrated as part of the Elite certification procedure for strawberries.

Onion sets, or seed, can only be marketed if accompanied by a statement that the onion sets or the seed in question are free from stem nematode (*Ditylenchus dipsaci*). Other crops also require a statement that they are free from nematode when exported to certain destinations. Naktuinbouw can help you with this. If you would like further information, please contact the Laboratories Administration Team.

Test fee

All fees are excluding sampling. The customer has to take care of sampling or you can ask Naktuinbouw to do this for you. You can contact Naktuinbouw Inspections Department to take samples for certification purposes.

Lead time

The mentioned test time is the time between start of the test till sending of the certificate. The waiting time till start of the test will be maximal 3 weeks. In exceptional cases (e.g. large demand of tests) it might deviate.

Standard tests on soil	Method	Test time (days)	Sample size	Test code	Fee
<i>Xiphinema spp.</i> / <i>Longidorus spp.</i>	Extraction	4	200 ml		€ 25,70
Standard test for one plant parasitic nematode ²	Extraction	4	200 ml		€ 44,20
Standard test for all present plant parasitic nematodes ²	Extraction	4	200 ml		€ 103,00
Determination <i>Radopholus spp.</i> ³ substrate	Extraction	4	200 - 300 ml		€ 126,00
<i>Ditylenchus</i>	Extraction	4	1500 ml		€ 44,20

Standard tests on plantmaterial / water	Method	Test time (days)	Sample size	Test code	Fee
Standard test for one plant parasitic nematode ²	Extraction	5	min. 25 gram		€ 49,70
Standard test for all plant parasitic nematodes present ²	Extraction	5	min. 25 gram		€ 63,00
Determination <i>Ditylenchus spp.</i> in consumption onions ³	Extraction	3	60 pce		€ 126,00
Determination <i>Radopholus spp.</i> ³ in root material	Extraction	3	10 grams		€ 126,00

Standard tests on seed	Method	Test time (days)	Sample size	Test code	Fee
<i>Ditylenchus spp.</i> ²	Extraction	5	30.000 seeds (max 500g)		€ 31,40
<i>Aphelenchoides spp.</i> ²	Extraction	5	30.000 seeds (max 500g)		€ 31,40

Other

	Fee
Fee per hour for extra research (if needed)	€ 130,00
Surcharge urgency fee	€ 75,50
Extra fee for incubation (This will take two additional weeks)	€ 25,60
Extra fee for determination on species level ³	€ 21,00

In case sampling is carried out by Naktuinbouw, sampling costs will be charged by the Department of Inspections

² Naktuinbouw Laboratories can determine the genus for the following nematodes.

³ Fees are inclusive priority treatments and basic rate

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|---|--|
| <ul style="list-style-type: none"> • <i>Aphelenchoides spp.</i>* • <i>Ditylenchus spp.</i>* • <i>Helicotylenchus spp.</i>* • <i>Hemicylophora spp.</i> • <i>Longidorus spp.</i> • <i>Meloidogyne spp.</i>*/** | <ul style="list-style-type: none"> • <i>Paratylenchus spp.</i>* • <i>Paratrichodorus spp.</i>* • <i>Pratylenchus spp.</i>* • <i>Radopholus spp.</i>* • <i>Rotylenchus spp.</i> • <i>Trichodorus spp.</i>* • <i>Tylenchorhynchus spp.</i> • <i>Xiphinema spp.</i> |
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* Mentioned nematodes can be determined to species with an extra fee.

** Distinction between *Meloidogyne chitwoodi* and *Meloidogyne fallax* is made using a PCR for € 67,-

Health Testing of Floriculture and Arboricultural Crops

Virus test methodes

A quick test is available for some about 70 viruses in floricultural and arboricultural crops: the ELISA. This technique can be used routinely and gives quick results. produces results fast. ELISA is a robust technique with reliable results and a relatively low cost price compared to other techniques. Testing with indicator plants or PCR is also possible. These tests are only carried out on leaf material. Tissue culture plants show a reduced sensitivity in the ELISA.

Lead time

The mentioned test time is the time between start of the test till sending of the certificate. The waiting time till start of the test will be maximal 2 weeks. In exceptional cases (e.g. large demand of tests) it might deviate.

Fees for ELISA tests

Virus

Group 1

	Test time (days)	Sample size	Fee
AICV (LSV), AIMV, AltMV, AMV, AnFBV (AFMoV), ArMV, BBWV, BWYV, BYMV, CarMV, CbMV, CERV, CLV, CMV, CNFV, CRSV, CSNV, CVB, CVMV, CymMV ⁵ , FreSV (FOV), FreMV, HdRSV, HVX, INSV, IYSV, KLV, KMV, NeRNV, ORSV ⁵ , OYDV, PEBV, PepMV ⁵ , PetAMV, PFBV, PLCV, PLPV, PMMoV, PnMV, PNRSV, Potyvirus ⁶ , PVX, PVY, PZSV, RMV, ScrMV, SFBV, SLV, SYN, TAV, TBRV, TBSV, TMGMV, TMV-WU1, TNV1, TNV2, ToMV-DO3, ToRSV, TRSV, TRV, TSV, TSWV, TVCV, YoMV	4	1-2 leaves/cuttings per sample. About 4 cm ² of leaf material is required.	€ 2,60

Group 2

	Test time (days)	Sample size	Test code	Fee
Freesia mosaic virus corms and cormels	4	1 CORM PER TEST	FREMVEKK	€ 5,50

⁵ A confirmation PCR of € 67,- may follow

⁶ If you provide material for testing on poty virus, please send double the amount of material as this is required to process the specimen.

Other tests

Virus ,viroids and phytoplasm tests

Plant material can be tested for the presence of viruses, viroids or phytoplasmas, using the latest new molecular techniques.

Fungal tests

Fungal tests Testing for fungi is are usually done by a plating method, combined with identification by microscope. New DNA techniques are used for sensitive detection of e.g. Fusarium species in begonia.

Fungal tests Testing for fungi can also be done on soil samples, e.g. for Verticillium dahliae and Fusarium oxysporum spp.

Bacterial

Seed and plant material can be tested for the presence of bacterial diseases. Some of the methods used are: plating on semi selective media, pathogenicity tests, immunofluorescence (IF) and PCR.

Viruses, Viroids and Phytoplasma	Method	Test time (days)	Sample size	Test code	Basic test	IF/ microscope/ agglutination	Confirmation PCR
PSTVd, TCDVd, TPMVd	PCR	4	Max. 25 leaves	PSTVD	€ 128,60		
CChMVd	PCR	4	Max. 25 leaves	CCHMVDP	€ 71,50		
CSVd	PCR	4	Max. 25 leaves	CSVDP	€ 71,50		
CSVd and CChMVd	PCR	4	Max. 25 leaves	COMBICSVDCCHMVD	€ 71,50		
Pospiviroids (CEVd, CLVd, CSVd, IrVd1, PCFVd, PolVd, PSTVd, TASVd, TCDVd, TPMVd)	PCR	4	Max. 25 leaves	POSPIP	€ 128,60		€ 112,50
			Max. 200 leaves	POSPIQSCR	€ 405,40		€ 112,50
<i>Dahlia mosaic virus</i> species complex (DMV / DCMV)	PCR	4	Max. 25 leaves	DMVQ	€ 71,50		
Necrotische-kringvlekkenvirus (PNRSV)	PCR	4	Max. 25 leaves	PNRSVQ	€ 71,00		
<i>Plum pox virus</i> (PPV)	PCR	4	stem material	PPVP	€ 112,50		
Prune dwarf virus (PDV)	PCR	4	Max. 25 leaves	PDVQ	€ 71,50		
<i>Prunus necrotic ringspot virus</i> (PNRSV) and <i>Prune dwarf virus</i> (PDV)	PCR	4	Max. 25 leaves	COMBIPPQ	€ 71,50		
PDV, PNRSV and PPV	PCR	4	Max. 25 leaves	COMBIPPPQ	€ 84,50		
<i>Tobacco rattle virus</i> (TRV)	PCR	4	Max. 25 leaves	TRVQ	€ 71,50		
<i>Cucumber mosaic virus</i> (CMV)	PCR	4	Max. 25 leaves	CMVQ	€ 71,50		
CMV and TRV	PCR	4	Max. 25 leaves	COMBICTQ	€ 84,50		
Apple chlorotic leaf spot virus (ACLSV)	PCR	4	Max. 10 stem parts or 25 leaves	ACLSVQ	€ 71,50		
Apple mosaic virus (ApMV)	PCR	4	Max. 10 stem parts or 25 leaves	APMVQ	€ 71,50		
Apple viruses (ApMV ACLSV ASGV ASPV)	PCR	4	Max. 10 stem parts or 25 leaves	COMBI APPEL PCR	€ 94,50		
Combi CymMV, ORSV, OFV real-time RT-PCR	PCR	4	Max. 25 leaves	COMBICOOQ	€ 84,50		
<i>Orchid fleck virus</i> (OFV) real-time RT-PCR	PCR	4	Max. 25 leaves	OFVP	€ 71,50		
CymMV and ORSV	PCR	4	Max. 25 leaves	COMBICOQ	€ 71,50		
<i>Bacopa chlorosis virus</i> (BaCV)	PCR	4	Max. 25 leaves	BACVQ	€ 71,50		
Verbena latent virus (VeLV)	PCR	4	Max. 25 leaves	VELVQ	€ 71,50		
Phytoplasma, for material without symptoms	PCR	4	Max. 5 stem parts, root parts or leaf vein	FYTOQ000	€ 113,60		€ 114,00
FreMV, FreSV, BYMV and FreV1 real-time RT-PCR	PCR	4	Max. 50 leaves	COMBIFFBFQ	€ 46,00		
			Max. 75 - 150 leaves	COMBIFFBFQ000	€ 138,00		
Fungi							
<i>Fusarium oxysporum</i>	Culture	10	Max. 6 stem parts	FOA000	€ 31,20	€ 101,30	
<i>Verticillium dahliae</i>	Culture	25	2 - 2.5 litre soil	VDAHLA000	€ 125,30		
<i>Fusarium foetens</i> , for material without symptoms	Culture	12	Max. 5 stem parts	FFA000	€ 84,00	€ 67,00	€ 67,00
<i>Phytophthora ramorum</i>	PCR	4	Max. 20 leaves	PRQ000	€ 34,90		
<i>Phytophthora ramorum</i> and <i>P. kernoviae</i>	PCR	4	Max. 20 leaves	COMBIPRKQ000	€ 54,50		
<i>Colletotrichum</i> spp.	Culture	9	200 seeds	CSF002	€ 132,30		

<i>Phytophthora rubi</i>	PCR	4	Max. 150 gram roots	PRUQ000	€ 126,00		
<i>Phytophthora fragariae</i>	PCR	4	Max. 150 gram roots	PFQ000	€ 126,00		
Bacteria			Sample size	Test code	Basic test	IF/ microscope/ agglutination	Confirmation PCR
<i>Agrobacterium tumefaciens</i>	Culture	7	0,5 liter water	ATUMP	€ 147,70		€ 67,00
	PCR	4	Max. 5 stem parts	ATUMQ	€ 45,80		
<i>Rhodococcus facians</i>	PCR	4	Max. 10 stem parts	RFASQ	€ 45,80		
Combination <i>A. tumefaciens</i> and <i>R. facians</i>	PCR	4	Max. 5 stem parts	COMBIAFQ	€ 62,50		
<i>Erwinia chrysanthemi</i>	IF	8	Max. 5 stem parts	ERCHRI	€ 32,90		€ 112,50
<i>Erwinia amylovora (latent)</i>	Culture	11	100 twigs	ERAMYS000	€ 114,70	€ 51,50	€ 67,00
<i>Xanthomonas axonopodis</i> pv. <i>dieffenbachiae</i> <i>Anthurium</i>	IF	8	Max. 5 leaves+leaf stems	XADIEI	€ 24,50		€ 112,50
<i>Xanthomonas campestris</i> pv. <i>lobeliae</i>	IF	9	Max. 5 stem parts	XCLOBI	€ 24,50	€ 54,00	
<i>Xanthomonas hortorum</i> pv. <i>pelargonii</i>	IF	8	Max. 5 stem parts	XHPELI	€ 24,50		€ 112,50
<i>Xanthomonas axonopodis</i> pv. <i>begoniae</i>	PCR	4	Max. 2 leaves	XABEGQ	€ 45,80		
			Max. 20 leaves	XABEGQ000	€ 68,50		
<i>Xylella fastidiosa</i>	PCR	4	100 to 200 leaves or twigs	XYLEFAQ000	€ 166,90		€ 130,00
<i>Ralstonia solanacearum</i> ⁷	Culture	12	Max. 5 stem parts	RSOLA	€ 38,40		€ 67,00
			0,5 liter water	RSOLA	€ 38,40		€ 67,00
			Max. 200 stem parts	RSOLA	€ 38,40		€ 67,00

Other	Fee
Fee per hour for extra research (if needed)	€ 130,00
Urgency fee	€ 75,50
Samples tested by Netherlands Food and Consumer Product Safety Authority	€ 206,00

⁷ As follow-up of the bio-PCR an extra PCR can be performed à € 67,-

Health Testing of Vegetable Crops

Testing for bacteria and phytoplasmas

Seed and plant material can be tested for the presence of bacterial diseases and phytoplasmas. Methods that are used are e.g., plating, pathogenicity tests, immunofluorescence (IF) and PCR.

Testing for fungi

Testing for fungi is usually done by a plating method, combined with identification by microscope. New DNA techniques are used for sensitive detection of e.g. *Fusarium* species. Testing for fungi can also be done on soil samples, e.g. for *Verticillium dahliae* and *Fusarium oxysporum* f.sp. *asparagi*.

Virus tests and viroids

Plant material and/or seed can be tested for the presence of viruses or viroids, using molecular techniques or ELISA.

Test fees

If confirmation tests have to be carried out, they are added to the fees of the basic test. Where combination testing is applicable, you can find the relevant fees with the individual tests.

Lead time

The mentioned test time is the time between start of the test till sending of the certificate. The waiting time till start of the test will be maximal 3 weeks. In exceptional cases (e.g. large demand of tests) it might deviate.

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
Asparagus								
<i>Pathogene Fusarium spp. for asparagus</i>	Culture	40	300 seeds	FOAA003	€ 124,30	€ 116,40		€ 116,40
On soil samples	Bio-assay	50	2.5 - 5 liter soil	FOAB000	€ 128,40			
Asparagus virus 1 (AV1)	ELISA	4	10 x 10 leaves	AV1E000	€ 93,50			
Aubergine								
Pepino mosaic virus (PepMV)	ELISA	4	3,000 seeds	PEPMVE030	€ 124,00		€ 67,00	
			4,750 seeds	PEPMVE048	€ 180,00		€ 67,00	
Pospiviroids (CEVd, CLVd, MPVd, PCFVd, PSTVd, TASVd, TCDVd and TPMVd)	PCR	4	3,000 seeds	COMBIPOSPIQ030PA	€ 178,60			
			4,800 seeds (12 x 400)	COMBIPOSPIQ048PA	€ 600,00			
			20,000 seeds (50 x 400)	COMBIPOSPIQ200PA	€ 2.500,00			
Tomato mottle mosaic virus (ToMMV)	PCR	4	20,000 seeds (50 x 400)	TOMMVQ200PA	€ 2.390,00			
<i>Verticillium dahliae</i>	Culture	14	200 seeds	VDA002	€ 124,00			
Basil								
<i>Fusarium oxysporum</i>	Culture	22	200 seeds	FOA002BA	€ 94,50	€ 100,20		

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
Bean								
<i>Xanthomonas axonopodis</i> pv. <i>phaseoli</i> and <i>Xanthomonas fuscans</i> subsp. <i>fuscans</i>	Culture	14	5,000 seeds	XAXFA050	€ 161,00		€ 67,00	
<i>Pseudomonas savastanoi</i> pv. <i>phaseolicola</i> (PSP)	Culture	12	5,000 seeds	PSPA050	€ 171,20		€ 67,00	
<i>Pseudomonas syringae</i> pv. <i>syringae</i> (PSS)	Culture	14	5,000 seeds	PSSA050	€ 209,40		€ 112,50	
			30,000 seeds	PSSA300	€ 416,00		€ 112,50	
<i>Curtobacterium flaccumfaciens</i> pv. <i>flaccumfaciens</i>	Culture	15	5,000 seeds	CFFA050	€ 170,10		€ 67,00	
Combination tests XAXF - PSP – PSS⁸								
2 pathogens:								
PSS - PSP	Culture	14	5,000 seeds	COMBIPPA050	€ 294,40			
			10,000 seeds	COMBIPPA100	€ 376,00			
PSS - XAXF	Culture	14	5,000 seeds	COMBIPXA050	€ 294,40			
XAXF - PSP	Culture	14	5,000 seeds	COMBIXPA050	€ 294,40			
3 pathogens:								
XAXF - PSP – PSS	Culture	14	5,000 seeds	COMBIXPPA050	€ 464,70			
			10,000 seeds	COMBIXPPA100	€ 675,00			
			30,000 seeds	COMBIXPPA300	€ 885,00			
XAP/XFF - PSP - CFF	Culture	14	5,000 zaden	COMBIXPCA050	€ 465,00			
4 pathogens:								
XAXF - PSP - PSS - CFF	Culture	15	5,000 seeds	COMBIXPPCA050	€ 630,00			
Bean common mosaic virus (BCMV)	ELISA	4	400 seeds	BCMVE004	€ 242,40			
<i>Ascochyta</i> spp.	Culture	11	200 seeds	ASSA002	€ 130,60			
<i>Colletotrichum lindemuthianum</i>	Culture	9	200 seeds	CLF002	€ 162,10			
⁸ Confirmation tests will be charged per test € 60,70 / € 103,00								
Beetroot								
<i>Phoma betae</i>	Culture	9	200 seeds	PBA002	€ 109,70			
			400 seeds	PBA004	€ 168,00			
			1,000 seeds	PBA010	€ 282,20			
Cabbage and Radish								
<i>Phoma lingam</i>	Culture	26	400 seeds	PLF004	€ 121,00			
			1,000 seeds	PLF010	€ 182,90			
			3,000 seeds	PLF030	€ 330,90			
			10,000 seeds	PLF100	€ 1.090,00			
<i>Plasmodiophora brassicae</i>	Bio-assay	44	2.5 liter soil	PLBKB000	€ 162,10			
<i>Alternaria brassicae</i> and <i>Alternaria brassicicola</i>	Culture	12	200 seeds	COMBIABBA002	€ 137,10			
			400 seeds	COMBIABBA004	€ 272,10			
<i>Verticillium</i> sp.	Culture	13	200 seeds	VSF002KS	€ 135,00			
<i>Pseudomonas syringae</i> pv. <i>maculicola</i> (PSM)	Culture	15	2,500 untreated seeds	PSMA025	€ 144,40		€ 67,00	
			7,500 untreated seeds	PSMA075	€ 161,10		€ 67,00	
			10,000 untreated seeds	PSMA100-4SUBS	€ 172,10		€ 67,00	
			10,000 treated seeds	PSMA100B	€ 184,70		€ 67,00	
			30,000 treated seeds	PSMA300B	€ 231,80		€ 67,00	

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
Cabbage and Radish (continued)								
Pseudomonas syringae pv. maculicola (PSM)	SE-PCR	4	10,000 seeds	PSMQ100	€ 166,40			
			30,000 seeds	PSMQ300	€ 408,10			
Combitoets XCCQ en XCRQ	SE-PCR	4	10,000 seeds untreated seeds	COMBIXXQ100	€ 200,00			
			30,000 seeds untreated seeds	COMBIXXQ300	€ 408,10			
			50,000 seeds untreated seeds	COMBIXXQ500	€ 630,00			
Combi toets XCC en XCR en PSM	SE-PCR	4	30,000 seeds untreated seeds	COMBIXXPQ300	€ 472,00			
<u>Combination tests:</u> <i>Xanthomonas campestris</i> pv. <i>raphani</i> (XCR) and <i>Xanthomonas campestris</i> pv. <i>campestris</i> (XCC) and <i>Pseudomonas syringae</i> pv. <i>maculicola</i> (PSM) (XCR synoniem: <i>Xanthomonas campestris</i> pv. <i>armoraciae</i> (XCA))								
Combination test XCA - XCC (untreated seeds)	Culture	32	10,000 untreated seeds	XXAS100	€ 197,00		€ 64,80	€ 108,00
			30,000 untreated seeds	XXAS300	€ 236,00		€ 64,80	€ 108,00
			50,000 untreated seeds	XXAS500	€ 344,00		€ 64,80	€ 108,00
			100,000 untreated seeds	XXAS1000	€ 479,00		€ 64,80	€ 108,00
Combination test XCA and XCC (seeds treated with warm water)	Culture	32	10,000 treated seeds	XXAS100B	€ 244,00		€ 64,80	€ 108,00
			30,000 treated seeds	XXAS300B	€ 279,00		€ 64,80	€ 108,00
			50,000 treated seeds	XXAS500B	€ 406,00		€ 64,80	€ 108,00
			100,000 treated seeds	XXAS1000B	€ 550,00		€ 64,80	€ 108,00
Combination test XCA, XCC and PSM	Culture	32	10,000 treated seeds	COMBIXXPAS100B	€ 305,00		€ 64,80	€ 108,00
			30,000 treated seeds	COMBIXXPAS300B	€ 343,00		€ 64,80	€ 108,00
Plasmidiaphora brassicae	Bio-assay	44	200 seeds	PLBKB001	€ 162,20			
Alternaria japonica	Culture	11	200 seeds	AJA002	€ 132,30			
Carrot								
<i>Xanthomonas hortorum</i> pv. <i>carotae</i>	Culture	17	10,000 seeds	XHCARA100	€ 170,00		€ 113,00	
			20,000 seeds	XHCARA200	€ 337,00		€ 113,00	
<i>Candidatus liberibacter solanacearum</i>	SE-PCR	4	10,000 seeds	CLSQ100	€ 188,00			
			20,000 seeds	CLSQ200	€ 298,00			
			30,000 seeds	CLSQ300	€ 408,00			
			50,000 seeds	CLSQ500	€ 705,00			
<i>Alternaria dauci</i>	Culture	12	200 seeds	ALDF002	€ 87,50			
<i>Alternaria radicina</i>	Culture	12	200 seeds	ALRF002	€ 87,50			
<i>Alternaria dauci</i> and <i>Alternaria radicina</i>	Culture	12	200 seeds	COMBIAAF002	€ 107,00			
			400 seeds	COMBIAAF004	€ 125,00			
Celery								
<i>Septoria apiicola</i>	Culture	9	200 seeds	SAF002	€ 100,90			
			400 seeds	SAF004	€ 134,00			
<i>Septoria apiicola</i>	Soaking	4	10,000 seeds	SAAF100	€ 63,00			
			20,000 seeds	SAAF200	€ 113,60			
<i>Phoma apiicola</i>	Culture	45	1,000 seeds	PAF010	€ 182,90			
<i>Candidatus liberibacter solanacearum</i>	SE-PCR	4	10,000 seeds	CLSQ100	€ 188,00			
			20,000 seeds	CLSQ200	€ 298,00			
			30,000 seeds	CLSQ300	€ 408,00			
			50,000 seeds	CLSQ500	€ 705,00			

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
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Chives

<i>Pseudomonas syringae</i> pv. <i>porri</i>	Culture	14	5,000 seeds	PSPOA050	€ 182,90		€ 67,00	
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Cucurbitaceae

<i>Acidovorax citrulli</i> - grow out (performed with treated seeds)	Bio-assay	30	10,000 seeds	ACB100	€ 357,20		€ 67,00	€ 109,70
			20,000 seeds	ACB200	€ 710,00		€ 67,00	€ 109,70
			30,000 seeds	ACB300	€ 1.070,00		€ 67,00	€ 109,70
<i>Acidovorax citrulli</i> - grow out (with additional costs for treatment by Naktuinbouw)	Bio-assay	30	10,000 seeds	ACB100+O	€ 377,00		€ 67,00	€ 109,70
			20,000 seeds	ACB200+O	€ 730,00		€ 67,00	€ 109,70
			30,000 seeds	ACB300+O	€ 1.090,00		€ 67,00	€ 109,70
<i>Acidovorax citrulli</i> ⁹ (untreated seeds only)	SE-PCR	4	10,000 seeds	ACQ100	€ 187,60			
			20,000 seeds	ACQ200	€ 297,80			
			30,000 seeds	ACQ300	€ 408,10			
			40,000 seeds	ACQ400	€ 520,00			
			50,000 seeds	ACQ500	€ 630,00			
			60,000 seeds	ACQ600	€ 740,00			
<i>Xanthomonas cucurbitae</i>	SE-PCR	4	300 seeds	XCQ003	€ 164,60			
			10,000 seeds	XCQ100	€ 187,60			
<i>Pseudomonas syringae</i> pv. <i>lachrymans</i>	SE-PCR	4	10,000 seeds	PSLQ100	€ 187,60			
<i>Acidovorax citrulli</i> and <i>Pseudomonas syringae</i> pv. <i>lachrymans</i>	SE-PCR	4	10,000 seeds	COMBIAPQ100	€ 252,50			
Combi <i>Xanthomonas cucurbitae</i> and <i>Pseudomonas syringae</i> pv. <i>lachrymans</i>	SE-PCR	4	10,000 seeds	COMBIPXQ100	€ 252,50			
Combi <i>Acidovorax citrulli</i> , <i>Pseudomonas syringae</i> pv. <i>lachrymans</i> and <i>Xanthomonas cucurbitae</i>	SE-PCR	4	10,000 seeds	COMBIAPXQ100	€ 317,60			
Combination <i>Acidovorax citrulli</i> and <i>Xanthomonas cucurbitae</i> real-time PCR	SE-PCR	4	10,000 seeds	COMBIAXQ100	€ 252,60			

⁹ If positive a grow out is recommended to confirm

Cucumber green mottle mosaic virus (CGMMV)	ELISA	4	300 leaves	CGMMVE000	€ 145,10			
			2,000 seeds	CGMMVE020	€ 158,40			
			4,000 seeds	CGMMVE040	€ 268,70			
			6,000 seeds	CGMMVE060	€ 376,20			
			8,000 seeds	CGMMVE080	€ 485,50			
			10,000 seeds	CGMMVE100	€ 595,00			
Cucumber green mottle mosaic virus (CGMMV)	Bio-assay	19	2,000 seeds	CGMMVB020	€ 246,60			
			4,000 seeds	CGMMVB040	€ 494,00			
Cucumber mosaic virus (CMV)	ELISA	4	2,000 seeds	CMVE020	€ 158,00			
Cucumber leaf spot virus (CLSV)	ELISA	4	1,000 seeds	CLSVE010	€ 124,30			
Melon necrotic spot virus (MNSV)	ELISA	4	2,000 seeds	MNSVE020	€ 158,40			
			10,000 seeds	MNSVE100	€ 595,00			
Squash mosaic virus (SqMV)	ELISA	4	2,000 seeds	SQMVE020	€ 158,40			
			8,000 seeds	SQMVE080	€ 485,50			
Zucchini green mottle mosaic virus (ZGMMV)	ELISA	4	2,000 seeds	ZGMMVE020	€ 158,40			
			4,600 seeds	ZGMMVE046	€ 376,00			
			10,000 seeds	ZGMMVE100	€ 595,00			
Kyuri green mottle mosaic virus (KGMMV)	ELISA	4	2,000 seeds	KGMMVE20	€ 158,40			
			10,000 seeds	KGMMVE100	€ 595,00			

Arabis mosaic virus (ArMV)	ELISA	4	2,000 seeds	ARMVE020	€ 123,80			
Zucchini yellow mosaic virus (ZYMV)	ELISA	4	2,000 seeds	ZYMVE020	€ 158,40			
Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
Cucurbitaceae (continued)								
Combination tests: CGMMV, CMV, KGMMV, MNSV, SqMV, ZGMMV								
2 viruses:	ELISA	4	2,000 seeds		€ 273,20			
			10,000 seeds		€ 1.030,00			
3 viruses:	ELISA	4	2,000 seeds		€ 397,50			
			4,000 seeds		€ 780,00			
			6,000 seeds		€ 1.160,00			
			8,000 seeds		€ 1.490,00			
			10,000 seeds		€ 1.760,00			
4 viruses:	ELISA	4	2,000 seeds		€ 464,70			
			10,000 seeds		€ 1.750,00			
5 viruses:	ELISA	4	2,000 seeds		€ 530,00			
			10,000 seeds		€ 2.000,00			
6 viruses :	ELISA	4	2,000 seeds		€ 600,00			
<i>Fusarium oxysporum</i> and <i>Fusarium solani</i>	Culture	22	200 seeds	FOSA002	€ 188,10	€ 188,00		
<i>Colletotrichum orbiculare</i>	Culture	15	200 seeds	COF002	€ 132,30			
<i>Verticillium dahliae</i>	Culture	15	200 seeds	VDA002	€ 124,00			
			400 seeds	VDA004	€ 248,00			

Fennel

<i>Candidatus liberibacter solanacearum</i>	SE-PCR	4	10,000 seeds	CLSQ100	€ 188,00			
			20,000 seeds	CLSQ200	€ 298,00			
			30,000 seeds	CLSQ300	€ 408,00			
			50,000 seeds	CLSQ500	€ 705,00			

Lambs Lettuce

<i>Peronospora valerianellae</i>	Bio-assay	23	400 seeds	PVB004	€ 105,00	€ 66,00		
			1,200 seeds	PVB012	€ 304,00	€ 66,00		
<i>Peronospora valerianellaea</i>	Soaking	4	1,000 seeds	PVAF010	€ 110,00			
<i>Phoma valerianella</i>	Culture	37	200 seeds	PVF002	€ 84,50			

Leek

<i>Pseudomonas syringae</i> pv. <i>porri</i>	Culture	14	5,000 seeds	PSPOA050	€ 182,90		€ 67,00	
<i>Alternaria porri</i>	Culture	12	200 seeds	APF002	€ 113,60			

Lettuce

Lettuce mosaic virus (LMV)	ELISA	4	10,000 seeds	LMVE100	€ 351,60		€ 67,00	
			30,000 seeds	LMVE300	€ 357,20		€ 67,00	
Lettuce mosaicvirus (LMV) seedlings	ELISA	4	2,000 seeds	LMVE020	€ 145,60		€ 67,00	
			4,000 seeds	LMVEZAAI040	€ 228,40		€ 67,00	
			6,000 seeds	LMVE060	€ 244,00		€ 67,00	
			10,000 seeds	LMVEZAAI100	€ 454,50		€ 67,00	
<i>Fusarium</i> spp.	Culture	22	200 seeds	FOA002SL	€ 94,00			
<i>Septoria</i> spp.	Culture	9	200 seeds	SSF002	€ 84,00			
<i>Septoria</i> spp.	Soaking	4	10,000 seeds	SSAF100	€ 63,00			

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
Onion								
<i>Botrytis allii</i>	Culture	16	400 seeds	BAA004	€ 188,00			
Parsley								
<i>Septoria petroselini</i>	Culture	9	200 seeds	SPF002	€ 106,50			
			400 seeds	SPF004	€ 155,90			
<i>Septoria petroselini</i>	Soaking	4	10,000 seeds	SPAF100	€ 63,00			
<i>Candidatus liberibacter solanacearum</i>	SE-PCR	4	10,000 seeds	CLSQ100	€ 188,00			
			20,000 seeds	CLSQ200	€ 298,00			
			30,000 seeds	CLSQ300	€ 408,00			
			50,000 seeds	CLSQ500	€ 705,00			
Pea								
<i>Pseudomonas syringae</i> pv. <i>pisii</i>	Culture	22	5,000 seeds	PSPIA050	€ 161,10		€ 67,00	
			15,000 seeds	PSPIA150	€ 194,30		€ 67,00	
Pea seed-borne mosaic virus (PSbMV)	ELISA	4	2,000 seeds	PSBMVE020	€ 158,40			
Pea early browning virus (PEBV)	ELISA	4	2,000 seeds	PEBVE020	€ 158,40			
Combination test PSbMV and PEBV	ELISA	4	2,000 seeds	COMBIPPE020	€ 217,70			
<i>Ascochyta</i> spp.	Culture	11	200 seeds	ASSA002	€ 130,60			
			400 seeds	ASSA004	€ 235,00			

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
Pepper								
<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i> (CMM)	Culture	35	10,000 seeds	CMMA100	€ 226,60		€ 67,00	
			20,000 seeds	CMMA200	€ 257,00		€ 67,00	
			30,000 seeds	CMMA300	€ 281,00		€ 67,00	€ 168,00
			50,000 seeds	CMMA500	€ 355,00		€ 67,00	€ 168,00
			60,000 seeds	CMMA600	€ 379,00		€ 67,00	€ 168,00
<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> (XCV) = <i>X.gardneri</i> , <i>X.euvesicatoria</i> , <i>X.perforans</i> and <i>X.vesicatoria</i>	Culture	17	10,000 seeds	XCVA100PA	€ 178,00			
			20,000 seeds	XCVA200PA	€ 188,80			
			30,000 seeds	XCVA300PA	€ 207,70		€ 67,00	
			40,000 seeds	XCVA400PA	€ 241,50		€ 67,00	
			50,000 seeds	XCVA500PA	€ 282,20		€ 67,00	
60,000 seeds	XCVA600PA	€ 330,50		€ 67,00				
<i>Erwinia carotovora</i> subsp. <i>carotovora</i> Synonym: <i>Pectobacterium carotovorum</i>	Culture	13	10,000 seeds	ECCA100	€ 227,00		€ 67,00	
Tobamovirus	Bio-assay	11	3,000 seeds	TOBAMOB030	€ 180,00			
Combination test ToMV-DO3, TMV, PMMoV ELISA	ELISA	4	3,000 seeds	COMBITOBAMOEPA	€ 171,00			
Pospiviroids (CEVd, CLVd, PCFVd, PSTVd, TASVd, TCDVd and TPMVd)	PCR	4	3,000 seeds	COMBIPOSPIQ030PA	€ 178,60			
			4,800 seeds (12 x 400)	COMBIPOSPIQ048PA	€ 600,00			
			6,000 seeds	COMBIPOSPIQ060PA	€ 291,00			
			20,000 seeds (50 x 400)	COMBIPOSPIQ200PA	€ 2.500,00			
Tomato brown rugose fruit virus (ToBRFV)	PCR	4	3,000 seeds	TOBRFVQ030PA	€ 166,00			
			4,800 seeds (12 x 400)	TOBRFVQ048PA	€ 575,00			
			20,000 seeds (50 x 400)	TOBRFVQ200PA	€ 2.390,00			
Tomato mottle mosaic virus (ToMMV)	PCR	4	3,000 seeds	TOMMVQ030PA	€ 166,00			
			4,800 seeds (12 x 400)	TOMMVQ048PA	€ 575,00			
			6,000 seeds	TOMMVQ060PA	€ 332,00			
			20,000 seeds (50 x 400)	TOMMVQ200PA	€ 2.390,00			
PSTVd, TCDVd, TPMVd	PCR	4	3,000 seeds	PSTVDQ030PA	€ 166,00			
			4,800 seeds (12 x 400)	PSTVDQ048PA	€ 575,00			
			20,000 seeds (50 x 400)	PSTVDQ200PA	€ 2.390,00			
Pospiviroids and ToBRFV	PCR	4	3,000 seeds	COMBIPTQ030PA	€ 243,20			
			4,800 seeds (12 x 400)	COMBIPTQ048PA	€ 635,00			
			20,000 seeds (50 x 400)	COMBIPTQ200PA	€ 2.870,00			
Pospiviroids and ToMMV	PCR	4	3,000 seeds	COMBIPTOMQ030PA	€ 291,00			
			20,000 seeds (50 x 400)	COMBIPTOMQ200PA	€ 2.870,00			
ToBRFV and ToMMV	PCR	4	3,000 seeds	COMBITTQ030PA	€ 231,00			
			20,000 seeds (50 x 400)	COMBITTQ200PA	€ 2.650,00			
PSTVd and ToBRFV	PCR	4	3,000 seeds	COMBIPSTOQ030PA	€ 231,00			
ToMMV, ToBRFV and Pospiviroids	PCR	4	3,000 seeds	COMBIPTTQ030PA	€ 333,00			
			4,800 seeds (12 x 400)	COMBIPTTQ048PA	€ 670,00			
			20,000 seeds (50 x 400)	COMBIPTTQ200PA	€ 3.350,00			
Tomato black ring virus (TBRV)	ELISA	4	3,000 seeds	TBRVE030	€ 124,00			
Tomato bushy stunt virus (TBSV)	ELISA	4	3,000 seeds	TBSVE030	€ 124,00			
<i>Verticillium dahliae</i>	Culture	14	200 seeds	VDA002	€ 124,00			

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
<u>Spinach</u>								
Cucumber mosaic virus (CMV)	ELISA	4	2,000 seeds	CMVE020SP	€ 158,00			
<i>Fusarium oxysporum</i>	Culture	22	200 seeds	FOA002SP	€ 133,00	€ 101,00		
			400 seeds	FOA004SP	€ 133,00	€ 101,00		
<i>Phomopsis</i> spp	Visual determination	3	30,000 seeds	PSV300	€ 55,50	€ 84,50		
<i>Cladosporium variabile</i>	Culture	15	200 seeds	CVF002	€ 114,00			
<i>Colletotrichum dematium</i>	Culture	15	200 seeds	CDF002	€ 83,50			
<i>Stemphylium botryosum</i>	Culture	15	200 seeds	SBF002	€ 114,00			
<i>Verticillium</i> spp.	Culture	15	200 seeds	VSF002	€ 114,00			
<i>Verticillium dahliae</i>	Culture	15	200 seeds	VDA002	€ 124,00			
<i>Peronospora farinosa</i>	Soaking	4	1,000 seeds	PFAF010	€ 110,00			
Combination tests:								
<i>Colletotrichum dematium</i> and <i>Verticillium</i> spp.	Culture	15	200 seeds	COMBIVCO	€ 171,00			
<i>Stemphylium botryosum</i> and <i>Verticillium</i> spp.	Culture	15	200 seeds	COMBIVS	€ 159,00			
<i>Stemphylium botryosum</i> , <i>Verticillium dahliae</i> and <i>Cladosporium</i> var.	Culture	15	200 seeds	COMBIVCS	€ 213,00			
<i>Stemphylium botryosum</i> and <i>Cladosporium variabile</i> blotter	Culture	15	200 seeds	COMBISCF002	€ 159,00			
<i>Stemphylium botryosum</i> , <i>Verticillium dahliae</i> , <i>Cladosporium</i> var. and <i>Colletotrichum dematium</i>	Culture	15	200 seeds	COMBIVCSC	€ 232,00			
<u>Sticky Nightshade (Solanum sisymbriifolium)</u>								
Pospiviroids (CEVd, CLVd, MPVd, PCFVd, PSTVd, TASVd, TCDVd and TPMVd)	PCR	4	3,000 seeds	COMBIPOSPIQ030PA	€ 178,60			
			4,800 seeds (12 x 400)	COMBIPOSPIQ048PA	€ 600,00			
			20,000 seeds (50 x 400)	COMBIPOSPIQ200PA	€ 2.500,00			
<u>Strawberry</u>								
<i>Xanthomonas fragariae</i>	PCR	4	max. 30 leaves	XFRAQ000	€ 138,70			
<i>Erwinia pyrifoliae</i>	PCR	4	max. 30 leaves	EPQ000	€ 138,70			
Combi <i>Xanthomonas fragariae</i> + <i>Erwinia pyrifoliae</i>	PCR	4	max. 30 leaves	COMBIXEQ000	€ 165,50			
<i>Colletotrichum acutatum</i>	Culture	15	200 seeds	CAF002	€ 132,30			
<i>Verticillium</i> species	Culture	15	5 stem pieces	VSA000	€ 67,00			
Strawberry viruses (SCV,SVBV,SMoV, SMYEV)	PCR	4	max. 10 leaves	COMBI AARDBEI PCR	€ 94,50			
<u>Sunflower (Helianthus)</u>								
<i>Sclerotinia sclerotiorum</i>	Culture	11	200 seeds	SCSA002	€ 107,00			

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
Tomato								
<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i> (CMM)	Culture	35	10,000 seeds	CMMA100	€ 226,60		€ 67,00	€ 168,00
			20,000 seeds	CMMA200	€ 257,00		€ 67,00	€ 168,00
			30,000 seeds	CMMA300	€ 281,00		€ 67,00	€ 168,00
			50,000 seeds	CMMA500	€ 355,00		€ 67,00	€ 168,00
			60,000 seeds	CMMA600	€ 379,00		€ 67,00	€ 168,00
<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i>	SE-PCR	4	10,000 seeds	CMMQ100	€ 188,00			
			30,000 seeds	CMMQ300	€ 227,00			
<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i>	SE-PCR and culture	35	10,000 seeds	COMBICMMA100	€ 299,00		€ 67,00	€ 168,00
			30,000 seeds	COMBICMMA300	€ 364,00		€ 67,00	€ 168,00
<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> (XCV) <i>X.gardneri</i> , <i>X.euvesicatoria</i> , <i>X.perforans</i> and	Culture	17	10,000 seeds	XCVA100	€ 220,00		€ 67,00	
			30,000 seeds	XCVA300	€ 267,00		€ 67,00	
<i>Pseudomonas syringae</i> pv. <i>tomato</i> (PST)	Culture	17	10,000 seeds	PSTA100	€ 227,00		€ 67,00	
			30,000 seeds	PSTA300	€ 258,00		€ 67,00	
Combination test for detection of CMM, XCV and PST¹⁰ 2 pathogens:								
PST / XCV	Culture	17	10,000 seeds	COMBIPXA100	€ 361,00			
			30,000 seeds	COMBIPXA300	€ 434,00			
CMM / XCV	Culture	35	10,000 seeds	COMBICXA100	€ 361,00			
			20,000 seeds	COMBICXA200	€ 399,00			
			30,000 seeds	COMBICXA300	€ 434,00			
			50,000 seeds	COMBICXA500	€ 598,00			
3 pathogens:								
CMM / PST / XCV	Culture	35	10,000 seeds	COMBICPXA100	€ 441,00			
			20,000 seeds	COMBICPXA200	€ 496,00			
			30,000 seeds	COMBICPXA300	€ 545,00			
			50,000 seeds	COMBICPXA500	€ 670,00			
			60,000 seeds	COMBICPXA600	€ 1.060,00			
			100,000 seeds	COMBICPXA1000	€ 1.330,00			
4 pathogens:								
CMM, XCV, PST, ECC			10,000 seeds	COMBICPXE100	€ 590,00			
<i>Erwinia carotovora</i> subsp. <i>carotovora</i> Synonym: <i>Pectobacterium carotovorum</i>			10,000 seeds	ECCA100	€ 227,00		€ 67,00	
¹⁰ Possible extra charge: Pathogenicity test CMM € 161,50 ; PCR per pathogen € 64,60								
TMV-WU1, ToMV-D03, PepMV	ELISA	4	3,000 seeds	COMBIPTTE030	€ 217,00			
ToMV-D03, TMV	ELISA	4	3,000 seeds	COMBITOBAMOE	€ 171,00			
			20,000 seeds	COMBITOBAMOE200	€ 1.020,00			
Tobamovirus	Bio-assay	11	3,000 seeds	TOBAMOB030	€ 180,00			
Pepino mosaic virus (PepMV)	ELISA	4	300 leaves	PEPMVE000	€ 145,00			
			3,000 seeds	PEPMVE030	€ 124,00		€ 67,00	
			4,750 seeds	PEPMVE048	€ 180,00		€ 67,00	
Pelargonium zonate spot virus (PZSV)	ELISA	4	3.000 zaden	PZSVE030	€ 157,00			
PSTVd, TCDVd, TPMVd	PCR	4	3,000 seeds	PSTVDQ030	€ 166,00			
			4,800 seeds (12x 400)	PSTVDQ048	€ 575,00			
			20,000 seeds (50x 400)	PSTVDQ200	€ 2.390,00			
			200 leaves (8x 25)	COMBIPOSPISCREEN	€ 405,00			

Tests Crop / Pathogen	Method	Test time (days)	Sample size	Test code	Basic test	IF / Microsc.	PCR	Bio test
Tomato continued								
Pospiviroids (CEVd, CLVd, PCFVd, PSTVd, TASVd, TCDVd and TPMVd)	PCR	4	3,000 seeds	COMBIPOSPIQ030	€ 179,00			
			4,800 seeds (12x 400)	COMBIPOSPIQ048	€ 600,00			
			6,000 seeds	COMBIPOSPIQ060	€ 291,00			
			20,000 seeds (50x 400)	COMBIPOSPIQ200	€ 2.500,00			
Tomato brown rugose fruit virus (ToBRFV)	PCR	4	3,000 seeds	TOBRFVQ030	€ 166,00			
			4,800 seeds	TOBRFVQ048	€ 575,00			
			20,000 seeds (50x 400)	TOBRFVQ200	€ 2.390,00			
Tomato yellow leaf curl virus (TYLCV)	PCR	4	3,000 seeds	TYLCVQ030	€ 166,00			
Tomato mottle mosaic virus (ToMMV)	PCR	4	3,000 seeds	TOMMVQ030	€ 166,00			
			4,800 seeds	TOMMVQ048	€ 575,00			
			6,000 seeds	TOMMVQ060	€ 332,00			
			20,000 seeds (50 x 400)	TOMMVQ200	€ 2.390,00			
Combi ToBRFV en TYLCV	PCR	4	3,000 seeds	COMBITOTYQ030	€ 231,00			
Combi TYLCV en ToMMV	PCR	4	3,000 seeds	COMBITYTOMQ030	€ 231,00			
Pospiviroids and ToMMV	PCR	4	3,000 seeds	COMBIPTOMQ030	€ 291,00			
			20,000 seeds	COMBIPTOMQ200	€ 2.870,00			
ToBRFV and ToMMV	PCR	4	3,000 seeds	COMBITTQ030	€ 231,00			
			20,000 seeds	COMBITTQ200	€ 2.650,00			
Pospiviroïden and ToBRFV	PCR	4	3,000 seeds	COMBIPTQ030	€ 243,20			
			4,800 seeds	COMBIPTQ048	€ 635,00			
			20,000 seeds (50x 400)	COMBIPTQ200	€ 2.870,00			
PSTVd and ToBRFV	PCR	4	3,000 seeds	COMBIPSTOQ030	€ 231,00			
ToMMV, ToBRFV and Pospiviroids	PCR	4	3,000 seeds	COMBIPTTQ030	€ 333,00			
			4,800 seeds	COMBIPTTQ048	€ 670,00			
			20,000 seeds (50 x 400)	COMBIPTTQ200	€ 3.350,00			
ToBRFV, ToMMV, TYLCV and Pospiviroids	PCR	4	3,000 seeds	COMBITTTPQ030	€ 375,00			
Tomato black ring virus (TBRV)	ELISA	4	3,000 seeds	TBRVE030	€ 124,00			
Tomato bushy stunt virus (TBSV)	ELISA	4	3,000 seeds	TBSVE030	€ 124,00			
ToRSV and TBRV	ELISA	4	3,000 seeds	COMBITOTBE030	€ 181,00			
TBRV and TBSV	ELISA	4	3,000 seeds	COMBITBRTBSE030	€ 159,00			
Fusarium oxysporum								
	Culture	22	200 seeds	FOA002TO	€ 94,00	€ 101,00		
			400 seeds	FOA004TO	€ 133,00	€ 101,00		
<i>Verticilium dahliae</i>	Culture	14	200 seeds	VDA002	€ 124,00			
<i>Alternaria solani</i>	Culture	12	200 seeds	ASF002	€ 114,00			
<i>Didymella lycopersici</i>	Culture	11	200 seeds	DLA002	€ 132,00			
Other								
Fee per hour for extra research (if needed)					€ 130,00			
Urgency fee					€ 75,50			
Samples tested by Netherlands Food and Consumer Product Safety Authority					€ 130,10			
Special tests by Netherlands Food and Consumer Product Safety Authority					€ 206,00			

Tests for the purpose of export requirements third countries

For seed material to be exported to third countries, the country of destination sometimes sets additional requirements. In order to facilitate export of your material Naktuinbouw has a number of tests available specifically for this purpose.

Lead time

The mentioned test time is the time between start of the test till sending of the certificate. The waiting time till start of the test will be maximal 3 weeks. In exceptional cases (e.g. large demand of tests) it might deviate.

Gewas	Pathogen	Method	Test time (days)	Sample size	Test code	Basic test
Aubergine	Tomato black ring virus (TBRV)	ELISA	4	3,000 seeds	9-TBRVE030	€ 146,00
	Tomato ringspot virus (ToRSV)	ELISA	4	3,000 seeds	TORSVE030	€ 146,00
Beetroot	Arabis mosaic virus (ArMV)	ELISA	4	3,000 seeds	ARMVE030	€ 146,00
	Heterodera schachtii			100 gram seeds	Tested at NPPO	€ 206,00
	Tomato black ring virus (TBRV)	ELISA	4	3,000 seeds	9-TBRVE030	€ 146,00
Carrot	Fusarium oxysporum	Culture	22	200 seeds	9-FOA002	€ 135,00
	Phoma sp.	Culture	18	200 seeds	9-PSF002	€ 135,00
Celery	Strawberry latent ringspot virus (SLRSV)	ELISA	4	3,000 seeds	SLRSVE030	€ 146,00
Cucurbitaceae	Tomato ringspot virus (ToRSV)	ELISA	4	2,000 seeds	TORSVE020	€ 179,00
	Alternaria cucumerina	Culture	9	200 seeds	9-ACA002	€ 135,00
	Tobacco ringspot virus (TRSV)	ELISA	4	2,000 seeds	TRSVE020	€ 179,00
	Combi ToRSV and TRSV ELISA	ELISA	4	2,000 seeds	COMBITOTRE020	€ 249,00
Lettuce	Arabis mosaic virus (ArMV)	ELISA	4	3,000 seeds	ARMVE030	€ 146,00
	Tomato ringspot virus (ToRSV)	ELISA	4	3,000 seeds	TORSVE030	€ 146,00
	Tobacco ringspot virus (TRSV)	ELISA	4	3,000 seeds	TRSVE030	€ 146,00
	Verticillium sp.	Culture	15	200 seeds	VSF002KS	€ 135,00
Onion	Onion yellow dwarf virus (OYDV)	ELISA	4	3,000 seeds	OYDVE030	€ 146,00
	Tobacco rattle virus (TRV)	ELISA	4	3,000 seeds	TRVE030	€ 146,00
	Tobacco streak virus (TSV)	ELISA	4	3,000 seeds	TSVE030	€ 146,00
	Tomato black ring virus (TBRV)	ELISA	4	3,000 seeds	9-TBRVE030	€ 146,00
Pepper	Arabis mosaic virus (ArMV)	ELISA	4	3,000 seeds	ARMVE030	€ 146,00
	Tobacco rattle virus (TRV)	ELISA	4	3,000 seeds	TRVE030	€ 146,00
	Tobacco ringspot virus (TRSV)	ELISA	4	3,000 seeds	TRSVE030	€ 146,00
	Tomato ringspot virus (ToRSV)	ELISA	4	3,000 seeds	TORSVE030	€ 146,00
Tomato	Arabis mosaic virus (ArMV)	ELISA	4	3,000 seeds	ARMVE030	€ 146,00
	Tobacco ringspot virus (TRSV)	ELISA	4	3,000 seeds	TRSVE030	€ 146,00
	Tobacco streak virus (TSV)	ELISA	4	3,000 seeds	TSVE030	€ 146,00
	Tomato ringspot virus (ToRSV)	ELISA	4	3,000 seeds	TORSVE030	€ 146,00
Other						
Urgency fee						€ 75,50

Seed Quality Analysis

The Seed Analysis Laboratory carries out various tests to assess the quality of seed of flowers, trees, vegetables and herbs. Tests for germination, purity and moisture content or for tetrazolium and weeds are carried out under ISTA accreditation. In addition, the more practice-related Usable Plants Test can be performed. This can be applied to crops such as tomato, sweet pepper, cucumber-like crops, lettuce and cabbage.

Test fees

Germination test	Sample size	Test code	Fee
ISTA certificate ¹¹	400 seeds	KK004	€ 61,50
Naktuinbouw certificate	400 seeds	KK004	€ 61,50
	300 seeds	KK003	€ 53,50
	200 seeds	KK002	€ 46,80
	100 seeds	KK001	€ 40,50

Germination on weight	Sample size	Test code	Fee
ISTA certificate ¹¹ / Naktuinbouw certificate	Betula 1 gram	KK/GEW BEP	€ 112,00

Usable Plant test

	Sample size	Test code	Fee
Naktuinbouw certificate	400 seeds	TBP004	€ 112,00
	300 seeds	TBP003	€ 105,00
	200 seeds	TBP002	€ 98,00
	100 seeds	TBP001	€ 91,00

¹¹ For ISTA certificates costs for sampling and certificates are billed separately.

Tetrazolium test (excluding tree and palm seeds)

	Sample size	Test code	Fee
ISTA certificate ¹¹	400 seeds	TET004	€ 242,00
Naktuinbouw certificate	400 seeds	TET004	€ 242,00
	200 seeds	TET002	€ 199,00
	100 seeds	TET001	€ 114,00

Tetrazolium test (tree and palm seeds)

	Sample size	Test code	Fee
ISTA certificate ¹¹	400 seeds	TETB004	€ 409,00
Naktuinbouw certificate	400 seeds	TETB004	€ 409,00
	200 seeds	TETB002	€ 362,00
	100 seeds	TETB001	€ 214,00

Vigour tests (Naktuinbouw certificate)	Sample size	Test code	Fee
Cold test (maize)	400 seeds	VIG004	€ 61,50
	300 seeds	VIG003	€ 53,50
	200 seeds	VIG002	€ 46,80
Conductancy test beans or peas (excl. moisture determination)	200 seeds	VIG EC 002	€ 23,70
Root respiration (beetroot and corn)	400 seeds	KK004	€ 61,50
	300 seeds	VIG WU 003	€ 53,50
	200 seeds	VIG WU 002 SB	€ 46,80
Root length determination (spinach)	200 seeds	VIG W/H RATIO 002	€ 60,00
Accelerated Aging Test			upon request
Thousand seed weight (These tests are done on clean seeds)	Sample size	Test code	Fee
ISTA certificate ¹¹	800 seeds	DKG 008	€ 27,10
	800 seeds	DKG 008	€ 27,10
Naktuinbouw certificate	400 seeds	DKG 004	€ 19,20
	300 seeds	DKG 003	€ 16,50
	200 seeds	DKG 002	€ 13,70

Moisture determination	Sample size	Test code	Fee
ISTA certificate ¹¹	50 or 100 gram	VOC	€ 24,40
Naktuinbouw certificate	25 gram	VOC	€ 24,40

Purity

Purity test (ISTA-certificate ¹¹ / Naktuinbouw-certificate)	Sample size	Test code	Fee
Pulses	2,500 seeds	ZB	€ 34,30
Other	2,500 seeds	ZB	€ 48,50
Purity test and determination of other seeds export Australia (combination test)	25,000 seeds	OB ZB AUSTRALIË	€ 210,00
Determining the presence of other seeds	25,000 seeds	OB 250 OROB	€ 176,00
Seed determination			upon request
Determining the presence of broken, discoloured etc. seeds ('piksel')		PB	€ 28,20

Various (Naktuinbouw certificate)

	Sample size	Test code	Fee
Determining the kind of starch for pea	5 seeds	ZB	€ 27,70
Determining dry matter of onion/carrot	10 bulbs/roots	DSB	€ 27,10
Determining 'single seeds rate' of beet seeds	400 seeds	MON	€ 50,50
Determining ploidy level	20 seeds	PLO	€ 41,60
Fractioning test	25,000 seeds		upon request
Determining the presence of Rhizomanie	500 gram seeds	RHI	€ 27,70
Determining the presence of Sclerotinia	25,000 seeds	SCL250	€ 53,50
Determining the presence of beetles in seed lots		KEV	€ 28,20

Extra charges

	Fee
Disinfection of seeds before testing	€ 19,40
Surcharge priority treatment	€ 146,00
Creation of an ISTA certificate	€ 10,60
Alteration on an ISTA certificate	€ 33,00
Alteration on a Naktuinbouw certificate	€ 4,40

Other

Fee per hour for extra research (if needed)	€ 130,00
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¹¹ For ISTA certificates costs for sampling and certificates are charged separately.

Variety Identification

Identity testing

Naktuinbouw has laboratory techniques to determine the identity of your material. This may be important and useful where material has been mixed, mistakenly replaced, origin tracing (pathogens), when the matter is urgent and/or when morphological research is not possible.

Identity testing is carried out by using DNA fingerprint techniques. A typical research project includes sampling, DNA isolation, fingerprinting, analysis, determination of the genetic relations, statistical analysis and reporting.

It is important for identity testing that the commissioning party provides the samples as well as adequate reference samples. If samples need to be compared to a Naktuinbouw database with varieties from a third party, Naktuinbouw has to and will ask for permission from said parties before a report can be issued.

For the crops; Strawberry, Phalaenopsis, Apple, Potato and Rose Naktuinbouw features a SSR-Database. For these varieties it is possible to do an identification project per sample.

Fees for SSR identification

	Per sample
For 1 - 4 Samples	€ 280,00
For 5 - 8 Samples	€ 258,00
For 9 - 16 Samples	€ 232,00

For more samples, we would gladly provide you with a quotation.

Fee for standard AFLP projects

Sample selection for AFLP projects are the responsibility of the commissioning party. If Naktuinbouw feels that the selection of reference varieties and/or the number of primer combinations are inadequate, no report will be issued until further testing. Unless the commissioning party is requesting a specific set of primer combinations for testing and analyses, it is up to Naktuinbouw to choose the primer combinations which will be tested.

For 1-16 samples with 4 primer combinations € 2.890

For other amounts of samples (17-32 or 33-64) and/or other amounts of primer combinations, we would gladly provide you with a quotation.

Variety Tracer

Naktuinbouw developed a concept to help with settling the allegations of infringement of plant breeders' rights and patents: Naktuinbouw Variety Tracer®. It can provide evidence in cases of alleged infringement of plant breeders' rights, it allows to determine the identity of varieties and it can confirm suspicion of repeated cropping. Naktuinbouw Variety Tracer combines knowledge, independence and the possibility of morphological research with the possibilities of DNA fingerprint techniques. It is the combination of – and synergy between – these elements that guarantees extremely sound analyses and provides important evidence for possible court cases.

Please contact us for more information and a quotation.

Molecular identification of Cmm / Xcc isolates.

The molecular analysis of isolates of plant pathogenic bacteria will give insight in the genetic similarity. This will be done by comparing the DNA profiles from the supplied samples amongst each other and to profiles stored in the database. The results of the analysis can give insight into the relationship between the occurrences of different isolates. The analysis will be performed on a single colony culture. These can be supplied by you, accompanied with a laboratory submission form. A combination with a diagnostic test is also possible if bacteria are found in symptomatic material. A single colony culture will be made on which the molecular analysis and comparison will be performed. The results will be provided in a report including a dendrogram.

Standard fee per isolate: € 307,00

Up to a minimum of 32 samples will be collected before the analysis will be started. If there are less than 32 samples the analysis will start within 3 months. Completion of the analysis and report may take up to 3 weeks.

Urgency fee: € 2.030,00 (excluding the fee per isolate of € 301,00)

The analysis will commence directly upon receiving the samples. Completion of the analysis and report may take up to 3 weeks.
For other organisms we would gladly provide you with a quotation.

Other services

DNA Isolation

1 plate, CTAB extraction (1 - 94 samples)	€ 323,00
2 plates, CTAB extraction (95 - 188 samples)	€ 485,00

AFLP, Tiff files

It's possible to receive a Tiff file of a primer combination without analysis.

1 gel project with 1 primer combination	€ 1.020,00
1 gel project with 2 primer combinations	€ 1.290,00

*Fees are based on 1-64 samples and without DNA isolation

Arboriculture Crops and Fruits

Bio assays and making crops free from viruses

Arboricultural crops (including apples, pears, small fruit, strawberries and roses) are made free from viruses by means of various treatments, including heat treatment, at the Naktuinbouw Test Centre in Horst. The tops of treated plants are grafted onto virus-free rootstock or propagated from cuttings. Subsequent laboratory analyses, liquid inoculations using test plants and grafting onto woody indicators is applied to confirm the virus-free status of the grafted tops.

Composition of the test fee

Naktuinbouw charges a base fee for handling costs in addition to the test rate as indicated below. The basic fee for every assignment is € 51,70.

Testing fees

Tests:

	Sample size	Fee
Virus test on two herbaceous host, both in duplicate	min. 2 g. leafs	€ 210,00
<i>Each following test plant, per single plant</i>	min. 2 g. leafs	€ 46,40
Virus test on two herbaceous host Saponaria, both in duplicate	min. 2 g. leafs	€ 146,00
Virus test on Prunus serrulata 'Shirofugen'		€ 221,00
Virus test on <i>Rubus occidentalis</i>		€ 221,00
Combination Apple viruses PCR test (ApMV – ACLSV - ASGV - ASPV) ¹²		€ 94,50
Virus test on woody indicator plants (in the greenhouse per indicator, per specimen)		€ 349,00
Virus test on woody indicator plants (in the field per indicator, per specimen)		€ 153,00
Virus test of strawberry by leaf grafting on <i>Fragaria vesca</i> UC5, UC12, EMC, Alpinum		€ 109,00
Combination of strawberry viruses PCR test (SCV – SVBV – SMoV – SMYEV)		€ 94,50

Rendering free of viruses; woody plants Making woody plants virus-free:

(Including testing program, heat treatment if necessary, excluding identity determination)

	Sample size	Fee
Strawberry (per variety)		€ 3.930,00
Soft fruits (<i>Ribes</i> , <i>Rubus</i> , a.o.) (per variety per year, maximum 2 years)		€ 3.280,00

Malus, Pyrus (per variety per year, maximum 5 years)

	Sample size	Fee
year 1 (pre-testing, heat treatment)		€ 2.830,00
year 2 (testing treated material)		€ 5.020,00
year 3 up to year 5 (maintaining treated material; fee per year)		€ 680,00

<i>Prunus</i> (per variety per year, maximum 4 years)	Sample size	Fee
year 1 (pre-testing, heat treatment)		€ 2.410,00
year 2 (testing treated material)		€ 4.120,00
year 3 and year 4 (maintaining treated material; fee per year)		€ 680,00

	Sample size	Fee
Other woody plants		upon request
Extra heat treatment		€ 950,00

Per order of woody plants and strawberry, 3 fully tested plants will be delivered.

Maintenance pre basic and pre nuclear stock		
	Sample size	Fee
Woody plants pre basic (fruit crops and soft fruit crops)		€ 170,00
Woody plants pre nuclear stock (fruit crops and soft fruit crops)		€ 74,50
Maintaining treated material pre basic strawberry	Per parent line	€ 339,00

Consignment		
	Sample size	Fee
Consignment pre basic strawberry ¹³		€ 29,10

<i>Small fruit</i>		
	Sample size	Fee
Consignment pre basic Cutting ¹³		€ 11,50
Consignment pre basic Plug plants ¹³		€ 7,90
Consignment pre basic Root blocks ¹³		€ 127,00

<i>Large fruit</i>		
	Sample size	Fee
Delivery graft inoculation wood	Per hour	€ 82,50

Special services		
	Sample size	Fee
Preparing material for the request for Plant Breeders' Rights		upon request
Health certificate import for (EU) 2019/829		upon request
DNA fingerprinting strawberry or raspberry variety		upon request