SAMPLE INFORMATION		PATIENT INFORMATION			
Sample ID:		Patient ID:			
Sampling date:		Name:			
Approval status:		Birth date:		Age:	
Print date:		ID/MR#:		Gender:	
Calibration curve:					

ORDERING PHYSICIAN INFORMATION
Ordering physician:
Address:

1. Summary of positive IgE results

Mainly species-specific aeroallergen components

Grass pollen					
Bermuda grass	nCyn d 1	Grass group 1	5,7	ISU-E	
Timothy grass	rPhl p 1	Grass group 1	14	ISU-E	
	nPhl p 4	Berberine bridge enzyme	5	ISU-E	
Tree pollen					
Olive pollen	rOle e 1	Common olive group 5	0,8	ISU-E	
Weed pollen					
Saltwort	nSal k 1	Pectin methylesterase	10	ISU-E	
Animal					
Cat	rFel d 1	Uteroglobin	0,7	ISU-E	

ISAC Standardized Units (ISU-E)	Level
< 0.3	Undetectable
0.3 - 0.9	Low
1 - 14.9	Moderate / High
≥ 15	Very High

SAMPLE INFORMATION	
Sample ID:	
Sampling date:	
Approval status:	
Print date:	
Calibration curve:	

PATIENT INFORMATION		
Patient ID:		
Name:		
Birth date:		Age:
ID/MR#:		Gender:

ORDERING PHYSICIAN INFORMATION	
Ordering physician:	
Address:	

ISAC Xplain

SUMMARY COMMENTS

This patient has IgE to species-specific components. In general, the higher the IgE level the greater the likelihood of allergic symptoms.

AEROALLERGEN COMPONENTS (mainly species-specific)

IgE to grass pollen, saltwort, olive and cat detected (listed in descending IgE concentration).

POLLEN: IgE to timothy components may cross-react with similar proteins in other grasses. IgE to bermuda grass Cyn d 1 and timothy grass Phl p 1 may cross-react. In general, the higher IgE level of the two indicates the original sensitizer. IgE to olive Ole e 1, the main olive component, is also a marker of ash sensitization. IgE to Sal k 1 is specific for saltwort.
ANIMALS: Fel d 1 is the main specific cat allergen.

SAMPLE INFORMATION		PATIENT INFORMATION		
Sample ID:		Patient ID:		
Sampling date:		Name:		
Approval status:		Birth date:	Age:	
Print date:		ID/MR#:	Gender:	
Calibration curve:				

ORDERING PHYSICIAN INFORMATION	
Ordering physician:	
Address:	

2. IgE results sorted by protein group

Mainly species-specific food components

Egg white	nGal d 1	Ovomucoid	<0.3	ISU-E
	nGal d 2	Ovalbumin	<0.3	ISU-E
	nGal d 3	Conalbumin/Ovotransferrin	<0.3	ISU-E
Egg yolk/chicken meat	nGal d 5	Livetin/Serum albumin	<0.3	ISU-E
Cow's milk	nBos d 4	Alpha-lactalbumin	<0.3	ISU-E
	nBos d 5	Beta-lactoglobulin	<0.3	ISU-E
	nBos d 8	Casein	<0.3	ISU-E
	nBos d lactoferrin	Transferrin	<0.3	ISU-E
Cod	rGad c 1	Parvalbumin	<0.3	ISU-E
Shrimp	nPen m 2	Arginine kinase	<0.3	ISU-E
	nPen m 4	Sarcoplasmic calcium binding protein	<0.3	ISU-E
Cashew nut	rAna o 2	Storage protein, 11S globulin	<0.3	ISU-E
Brazil nut	rBer e 1	Storage protein, 2S albumin	<0.3	ISU-E
Hazelnut	nCor a 9	Storage protein, 11S globulin	<0.3	ISU-E
Walnut	rJug r 1	Storage protein, 2S albumin	<0.3	ISU-E
	nJug r 2	Storage protein, 7S globulin	<0.3	ISU-E
Sesame seed	nSes i 1	Storage protein, 2S albumin	<0.3	ISU-E
Peanut	rAra h 1	Storage protein, 7S globulin	<0.3	ISU-E
	rAra h 2	Storage protein, Conglutin	<0.3	ISU-E
	rAra h 3	Storage protein, 11S globulin	<0.3	ISU-E
	nAra h 6	Storage protein, 2S albumin	<0.3	ISU-E
Soybean	nGly m 5	Storage protein, Beta-conglycinin	<0.3	ISU-E
	nGly m 6	Storage protein, Glycinin	<0.3	ISU-E
Buckwheat	nFag e 2	Storage protein, 2S albumin	<0.3	ISU-E
Wheat	rTri a 19.0101	Omega-5 gliadin	<0.3	ISU-E
	nTri a aA_TI	Alpha-amylase / Trypsin inhibitor	<0.3	ISU-E
Kiwi	nAct d 1	Cysteine protease	<0.3	ISU-E
	nAct d 5	Kiwellin	<0.3	ISU-E

Parvalbumins are major allergens in fish and markers for cross-reactivity among different species of fish.

Mainly species-specific aeroallergen components

Grass pollen

Bermuda grass	nCyn d 1	Grass group 1	5,7	ISU-E

Mainly species-specific aeroallergen components

Grass pollen					
Timothy grass	rPhl p 1	Grass group 1	14	ISU-E	
	rPhl p 2	Grass group 2	<0.3	ISU-E	
	nPhl p 4	Berberine bridge enzyme	5	ISU-E	
	rPhl p 5	Grass group 5	<0.3	ISU-E	
	rPhl p 6	Grass group 6	<0.3	ISU-E	
	rPhl p 11	Ole e 1-related protein	<0.3	ISU-E	
Tree pollen					
Birch	rBet v 1	PR-10 protein	<0.3	ISU-E	
Japanese cedar	nCry j 1	Pectate lyase	<0.3	ISU-E	
Cypress	nCup a 1	Pectate lyase	<0.3	ISU-E	
Olive pollen	rOle e 1	Common olive group 5	0,8	ISU-E	
	rOle e 9	Beta-1,3-glucanase	<0.3	ISU-E	
Plane tree	rPla a 1	Putative invertase inhibitor	<0.3	ISU-E	
	nPla a 2	Polygalacturonase	<0.3	ISU-E	

Ole e 1 is also a marker for ash sensitization.

Weed pollen					
Ragweed	nAmb a 1	Pectate lyase	<0.3	ISU-E	
Mugwort	nArt v 1	Defensin	<0.3	ISU-E	
Goosefoot	rChe a 1	Ole e 1-related protein	<0.3	ISU-E	
Wall pelitory	rPar j 2	Lipid transfer protein (nsLTP)	<0.3	ISU-E	
Plantain	rPla l 1	Ole e 1-related protein	<0.3	ISU-E	
Saltwort	nSal k 1	Pectin methylesterase	10	ISU-E	
Animal					
Dog	rCan f 1	Lipocalin	<0.3	ISU-E	
	rCan f 2	Lipocalin	<0.3	ISU-E	
	rCan f 5	Arginine Esterase	<0.3	ISU-E	
Horse	rEqu c 1	Lipocalin	<0.3	ISU-E	
Cat	rFel d 1	Uteroglobin	0,7	ISU-E	
	rFel d 4	Lipocalin	<0.3	ISU-E	
Mouse	nMus m 1	Lipocalin	<0.3	ISU-E	
Mold					
Alternaria	rAlt a 1	Acidic glycoprotein	<0.3	ISU-E	
	rAlt a 6	Enolase	<0.3	ISU-E	
Aspergillus	rAsp f 1	Mitogillin family	<0.3	ISU-E	
	rAsp f 3	Peroxysomal protein	<0.3	ISU-E	
	rAsp f 6	Mn superoxide dismutase	<0.3	ISU-E	
Cladosporium	rCla h 8	Mannitol dehydrogenase	<0.3	ISU-E	
Mite					
B. tropicalis (HDM)	rBlo t 5	Mite group 5	<0.3	ISU-E	
D. farinae (HDM)	nDer f 1	Cysteine protease	<0.3	ISU-E	
	rDer f 2	NPC2 family	<0.3	ISU-E	
D. pteronyssinus (HDM)	nDer p 1	Cysteine protease	<0.3	ISU-E	
	rDer p 2	NPC2 family	<0.3	ISU-E	
L. destructor (storage mite)	rLep d 2	NPC2 family	<0.3	ISU-E	
Cockroach					
Cockroach	rBla g 1	Cockroach group 1	<0.3	ISU-E	
	rBla g 2	Aspartic protease	<0.3	ISU-E	
	rBla g 5	Glutathione S-transferase	<0.3	ISU-E	

Other mainly species-specific components

Venom

Honey bee venom	rApi m 1	Phospholipase A2	<0.3 ISU-E
	nApi m 4	Melittin	<0.3 ISU-E
Paper wasp	rPol d 5	Antigen 5	<0.3 ISU-E
Common wasp	rVes v 5	Antigen 5	<0.3 ISU-E

ImmunoCAP ISAC should not be used to confirm suspicion of venom allergy. Instead ImmunoCAP sIgE components or complete allergens should be used. When ImmunoCAP ISAC reveals IgE abs to venoms further testing for venom allergy is recommended. The venom components on ImmunoCAP ISAC are CCD free.

Parasite

Anisakis	rAni s 1	Serine protease inhibitor	<0.3 ISU-E

Latex

Latex	rHev b 1	Rubber elongation factor	<0.3 ISU-E
	rHev b 3	Small rubber particle protein	<0.3 ISU-E
	rHev b 5	Acidic protein	<0.3 ISU-E
	rHev b 6.01	Prohevein	<0.3 ISU-E

Cross-reactive components

Serum albumin

Cow's milk/meat	nBos d 6	Serum albumin	<0.3 ISU-E
Dog	nCan f 3	Serum albumin	<0.3 ISU-E
Horse	nEqu c 3	Serum albumin	<0.3 ISU-E
Cat	nFel d 2	Serum albumin	<0.3 ISU-E

An abundant protein present in different animal tissues, e.g blood, milk, meat (e.g. beef) and egg. Cross-reactions between albumins from different animal species are well known, for example between cat and dog or cat and pork.

Tropomyosin

Anisakis	rAni s 3	Tropomyosin	<0.3 ISU-E
Cockroach	nBla g 7	Tropomyosin	<0.3 ISU-E
D. pteronyssinus (HDM)	rDer p 10	Tropomyosin	<0.3 ISU-E
Shrimp	nPen m 1	Tropomyosin	<0.3 ISU-E

An actin-binding protein in muscle fibers. A marker for cross-reactivity between crustaceans, mites and cockroaches.

Lipid transfer protein (nsLTP)

Peanut	rAra h 9	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Hazelnut	rCor a 8	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Walnut	nJug r 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Peach	rPru p 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Wheat	rTri a 14	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Mugwort	nArt v 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Olive pollen	nOle e 7	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Plane tree	rPla a 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E

Sensitization to LTPs is often associated with allergic reactions to fruit and vegetables in regions where peaches and closely related fruits are cultivated and is often associated with systemic and more severe reactions in addition to OAS. LTP proteins are stable to heat and digestion causing reactions also to cooked foods.

PR-10 protein

Birch	rBet v 1	PR-10 protein	<0.3 ISU-E
Alder	rAln g 1	PR-10 protein	<0.3 ISU-E
Hazel pollen	rCor a 1.0101	PR-10 protein	<0.3 ISU-E
Hazelnut	rCor a 1.0401	PR-10 protein	<0.3 ISU-E
Apple	rMal d 1	PR-10 protein	<0.3 ISU-E
Peach	rPru p 1	PR-10 protein	<0.3 ISU-E

Cross-reactive components

PR-10 protein

Soybean	rGly m 4	PR-10 protein	<0.3 ISU-E
Peanut	rAra h 8	PR-10 protein	<0.3 ISU-E
Kiwi	rAct d 8	PR-10 protein	<0.3 ISU-E
Celery	rApi g 1	PR-10 protein	<0.3 ISU-E

Birch or related Fagales tree pollens are often the primary sensitizer to PR-10 proteins in areas with high exposure to these pollens. The presence of PR-10 proteins in many plant foods can cause allergic reactions to fruits, nuts and vegetables due to cross-reactivity, and is often associated with local symptoms such as oral allergy syndrom (OAS). Many of these proteins are heat labile and cooked foods are often tolerated.

Thaumatine-like protein

Kiwi	nAct d 2	Thaumatin-like protein	<0.3 ISU-E

Act d 2 may give rise to cross-reactivity with other thaumatin-like proteins. Thaumatin-like proteins have been found in pollen, fruits (e.g. apple and grape), fungi (Alternaria), mites and insects.

Profilin

Birch	rBet v 2	Profilin	<0.3 ISU-E
Latex	rHev b 8	Profilin	<0.3 ISU-E
Annual mercury	rMer a 1	Profilin	<0.3 ISU-E
Timothy grass	rPhl p 12	Profilin	<0.3 ISU-E

Profilins show great homology and cross-reactivity even between distantly related plant species. Seldom associated with clinical symptoms but may cause demonstrable or even severe reactions in a minority of patients allergic to e.g. citrus fruits, melon, banana, litchi and tomato.

CCD

CCD	nMUXF3	CCD	<0.3 ISU-E

Cross-reactive Carbohydrate Determinants (CCD) are rarely associated with allergic reactions, but may produce positive in-vitro test results to CCD-containing allergens from pollen, plant food, insects and venoms.

Polcalcin (Calcium binding 2-EF-hand protein)

Birch	rBet v 4	Polcalcin	<0.3 ISU-E
Timothy grass	rPhl p 7	Polcalcin	<0.3 ISU-E

Markers for cross-reactivity between pollen.

ISAC Standardized Units (ISU-E)	Level
< 0.3	Undetectable
0.3 - 0.9	Low
1 - 14.9	Moderate / High
≥ 15	Very High

SYNLAB

ImmunoCAP ISAC

SAMPLE INFORMATION		PATIENT INFORMATION			
Sample ID:		Patient ID:			
Sampling date:		Name:			
Approval status:		Birth date:		Age:	
Print date:		ID/MR#:		Gender:	
Calibration curve:					

ORDERING PHYSICIAN INFORMATION	
Ordering physician:	
Address:	

3. IgE results sorted by allergen source

Food allergens

Egg white	nGal d 1	Ovomucoid	<0.3 ISU-E
	nGal d 2	Ovalbumin	<0.3 ISU-E
	nGal d 3	Conalbumin/Ovotransferrin	<0.3 ISU-E
Egg yolk/chicken meat	nGal d 5	Livetin/Serum albumin	<0.3 ISU-E
Cow's milk	nBos d 4	Alpha-lactalbumin	<0.3 ISU-E
	nBos d 5	Beta-lactoglobulin	<0.3 ISU-E
Cow's milk/meat	nBos d 6	Serum albumin	<0.3 ISU-E
Cow's milk	nBos d 8	Casein	<0.3 ISU-E
	nBos d lactoferrin	Transferrin	<0.3 ISU-E
Cod	rGad c 1	Parvalbumin	<0.3 ISU-E
Shrimp	nPen m 1	Tropomyosin	<0.3 ISU-E
	nPen m 2	Arginine kinase	<0.3 ISU-E
	nPen m 4	Sarcoplasmic calcium binding protein	<0.3 ISU-E
Cashew nut	rAna o 2	Storage protein, 11S globulin	<0.3 ISU-E
Brazil nut	rBer e 1	Storage protein, 2S albumin	<0.3 ISU-E
Hazelnut	rCor a 1.0401	PR-10 protein	<0.3 ISU-E
	rCor a 8	Lipid transfer protein (nsLTP)	<0.3 ISU-E
	nCor a 9	Storage protein, 11S globulin	<0.3 ISU-E
Walnut	rJug r 1	Storage protein, 2S albumin	<0.3 ISU-E
	nJug r 2	Storage protein, 7S globulin	<0.3 ISU-E
	nJug r 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Sesame seed	nSes i 1	Storage protein, 2S albumin	<0.3 ISU-E
Peanut	rAra h 1	Storage protein, 7S globulin	<0.3 ISU-E
	rAra h 2	Storage protein, Conglutin	<0.3 ISU-E
	rAra h 3	Storage protein, 11S globulin	<0.3 ISU-E
	nAra h 6	Storage protein, 2S albumin	<0.3 ISU-E
	rAra h 8	PR-10 protein	<0.3 ISU-E
	rAra h 9	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Soybean	rGly m 4	PR-10 protein	<0.3 ISU-E
	nGly m 5	Storage protein, Beta-conglycinin	<0.3 ISU-E
	nGly m 6	Storage protein, Glycinin	<0.3 ISU-E
Buckwheat	nFag e 2	Storage protein, 2S albumin	<0.3 ISU-E
Wheat	rTri a 14	Lipid transfer protein (nsLTP)	<0.3 ISU-E

Wheat	rTri a 19.0101	Omega-5 gliadin	<0.3	ISU-E
	nTri a aA_TI	Alpha-amylase / Trypsin inhibitor	<0.3	ISU-E
Kiwi	nAct d 1	Cysteine protease	<0.3	ISU-E
	nAct d 2	Thaumatin-like protein	<0.3	ISU-E
	nAct d 5	Kiwellin	<0.3	ISU-E
	rAct d 8	PR-10 protein	<0.3	ISU-E
Apple	rMal d 1	PR-10 protein	<0.3	ISU-E
Peach	rPru p 1	PR-10 protein	<0.3	ISU-E
	rPru p 3	Lipid transfer protein (nsLTP)	<0.3	ISU-E
Celery	rApi g 1	PR-10 protein	<0.3	ISU-E

Aeroallergens

Bermuda grass	nCyn d 1	Grass group 1	5,7	ISU-E
Timothy grass	rPhl p 1	Grass group 1	14	ISU-E
	rPhl p 2	Grass group 2	<0.3	ISU-E
	nPhl p 4	Berberine bridge enzyme	5	ISU-E
	rPhl p 5	Grass group 5	<0.3	ISU-E
	rPhl p 6	Grass group 6	<0.3	ISU-E
	rPhl p 7	Polcalcin	<0.3	ISU-E
	rPhl p 11	Ole e 1-related protein	<0.3	ISU-E
	rPhl p 12	Profilin	<0.3	ISU-E
Alder	rAln g 1	PR-10 protein	<0.3	ISU-E
Birch	rBet v 1	PR-10 protein	<0.3	ISU-E
	rBet v 2	Profilin	<0.3	ISU-E
	rBet v 4	Polcalcin	<0.3	ISU-E
Hazel pollen	rCor a 1.0101	PR-10 protein	<0.3	ISU-E
Japanese cedar	nCry j 1	Pectate lyase	<0.3	ISU-E
Cypress	nCup a 1	Pectate lyase	<0.3	ISU-E
Olive pollen	rOle e 1	Common olive group 5	0,8	ISU-E
	nOle e 7	Lipid transfer protein (nsLTP)	<0.3	ISU-E
	rOle e 9	Beta-1,3-glucanase	<0.3	ISU-E
Plane tree	rPla a 1	Putative invertase inhibitor	<0.3	ISU-E
	nPla a 2	Polygalacturonase	<0.3	ISU-E
	rPla a 3	Lipid transfer protein (nsLTP)	<0.3	ISU-E
Ragweed	nAmb a 1	Pectate lyase	<0.3	ISU-E
Mugwort	nArt v 1	Defensin	<0.3	ISU-E
	nArt v 3	Lipid transfer protein (nsLTP)	<0.3	ISU-E
Goosefoot	rChe a 1	Ole e 1-related protein	<0.3	ISU-E
Annual mercury	rMer a 1	Profilin	<0.3	ISU-E
Wall pelitory	rPar j 2	Lipid transfer protein (nsLTP)	<0.3	ISU-E
Plantain	rPla l 1	Ole e 1-related protein	<0.3	ISU-E
Saltwort	nSal k 1	Pectin methylesterase	10	ISU-E
Dog	rCan f 1	Lipocalin	<0.3	ISU-E
	rCan f 2	Lipocalin	<0.3	ISU-E
	nCan f 3	Serum albumin	<0.3	ISU-E
	rCan f 5	Arginine Esterase	<0.3	ISU-E
Horse	rEqu c 1	Lipocalin	<0.3	ISU-E
	nEqu c 3	Serum albumin	<0.3	ISU-E
Cat	rFel d 1	Uteroglobin	0,7	ISU-E
	nFel d 2	Serum albumin	<0.3	ISU-E
	rFel d 4	Lipocalin	<0.3	ISU-E
Mouse	nMus m 1	Lipocalin	<0.3	ISU-E

Aeroallergens

Alternaria	rAlt a 1	Acidic glycoprotein	<0.3 ISU-E
	rAlt a 6	Enolase	<0.3 ISU-E
Aspergillus	rAsp f 1	Mitogillin family	<0.3 ISU-E
	rAsp f 3	Peroxysomal protein	<0.3 ISU-E
	rAsp f 6	Mn superoxide dismutase	<0.3 ISU-E
Cladosporium	rCla h 8	Mannitol dehydrogenase	<0.3 ISU-E
B. tropicalis (HDM)	rBlo t 5	Mite group 5	<0.3 ISU-E
D. farinae (HDM)	nDer f 1	Cysteine protease	<0.3 ISU-E
	rDer f 2	NPC2 family	<0.3 ISU-E
D. pteronyssinus (HDM)	nDer p 1	Cysteine protease	<0.3 ISU-E
	rDer p 2	NPC2 family	<0.3 ISU-E
	rDer p 10	Tropomyosin	<0.3 ISU-E
L. destructor (storage mite)	rLep d 2	NPC2 family	<0.3 ISU-E
Cockroach	rBla g 1	Cockroach group 1	<0.3 ISU-E
	rBla g 2	Aspartic protease	<0.3 ISU-E
	rBla g 5	Glutathione S-transferase	<0.3 ISU-E
	nBla g 7	Tropomyosin	<0.3 ISU-E

Other

Honey bee venom	rApi m 1	Phospholipase A2	<0.3 ISU-E
	nApi m 4	Melittin	<0.3 ISU-E
Paper wasp	rPol d 5	Antigen 5	<0.3 ISU-E
Common wasp	rVes v 5	Antigen 5	<0.3 ISU-E
Anisakis	rAni s 1	Serine protease inhibitor	<0.3 ISU-E
	rAni s 3	Tropomyosin	<0.3 ISU-E
Latex	rHev b 1	Rubber elongation factor	<0.3 ISU-E
	rHev b 3	Small rubber particle protein	<0.3 ISU-E
	rHev b 5	Acidic protein	<0.3 ISU-E
	rHev b 6.01	Prohevein	<0.3 ISU-E
	rHev b 8	Profilin	<0.3 ISU-E
CCD	nMUXF3	CCD	<0.3 ISU-E

ISAC Standardized Units (ISU-E)	Level
< 0.3	Undetectable
0.3 - 0.9	Low
1 - 14.9	Moderate / High
≥ 15	Very High