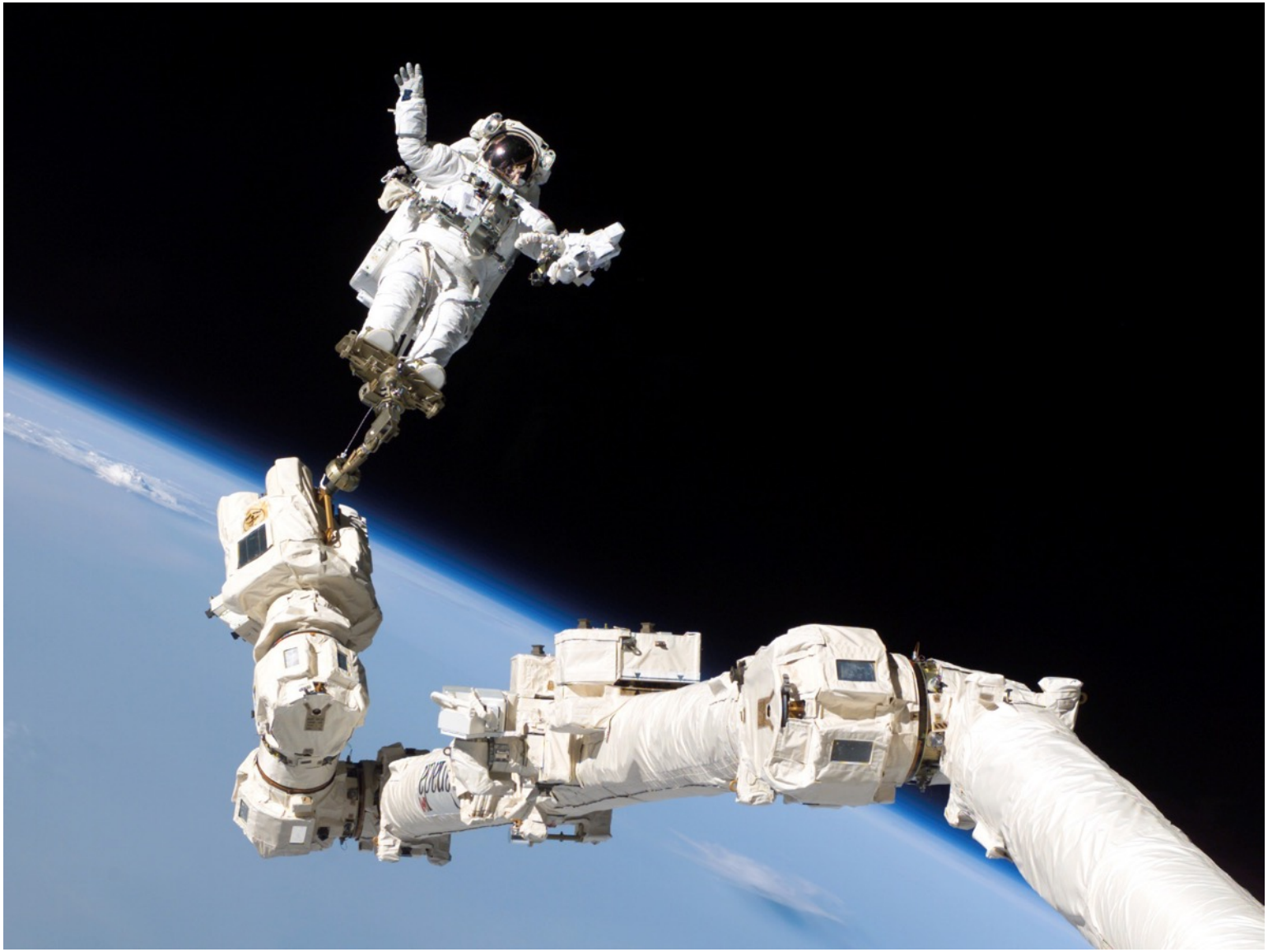
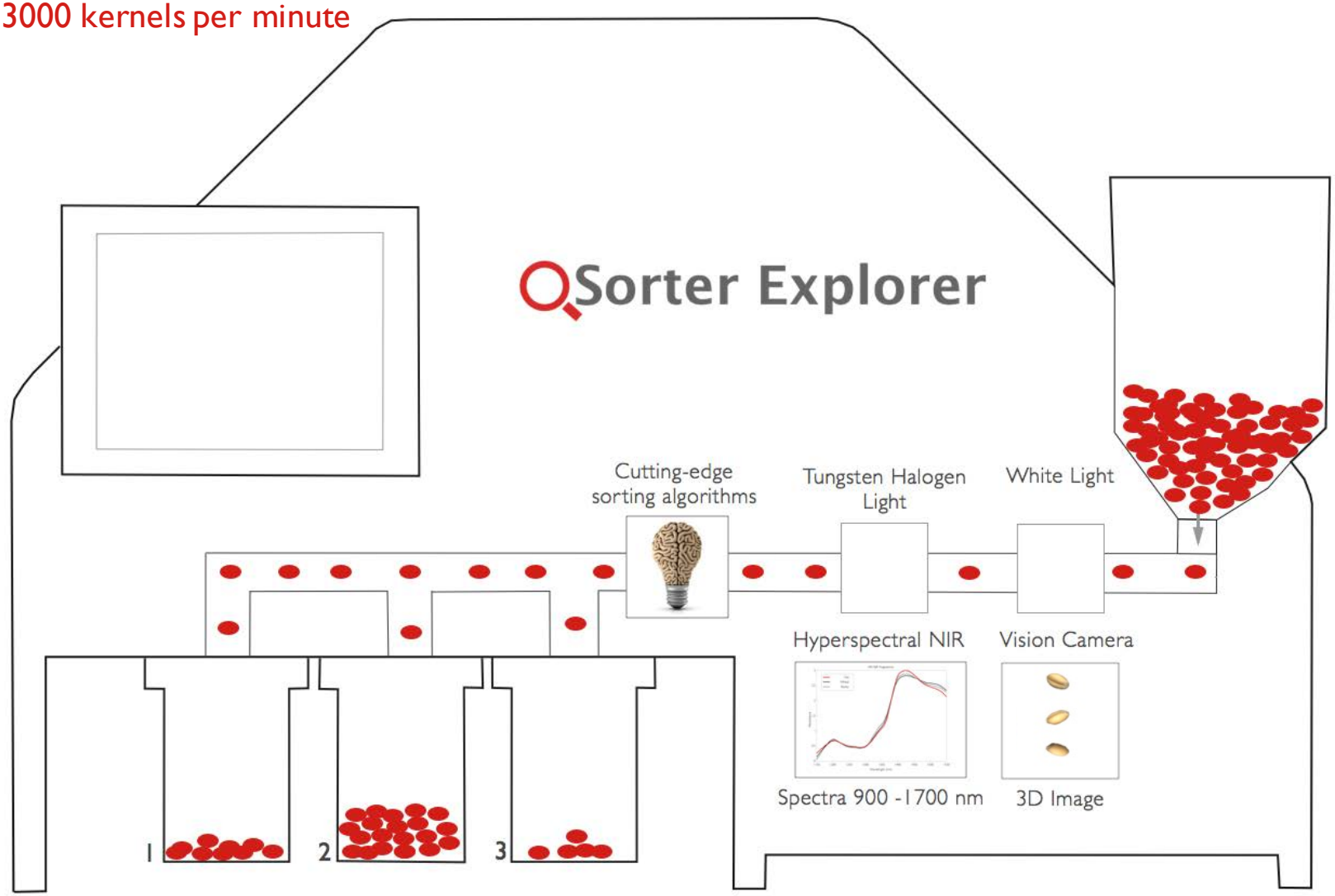
QualySense
Excellence in nutrition, health and safety



We commit to bringing excellence in nutrition, health and food safety to people all over the world.

One-by-one analysis and sorting of grains…

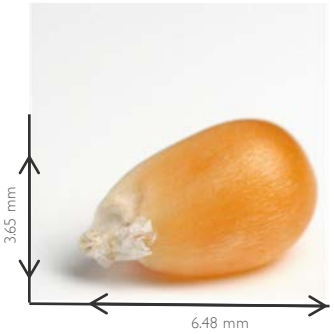
Up to 3000 kernels per minute



…by their physical and biochemical properties at once

INSECT DAMAGE

BROKEN KERNELS



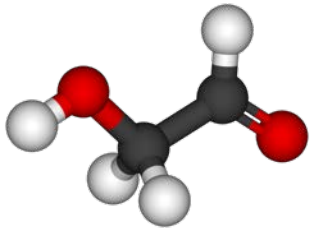
GEOMETRY

DISEASES (FUSARIUM)

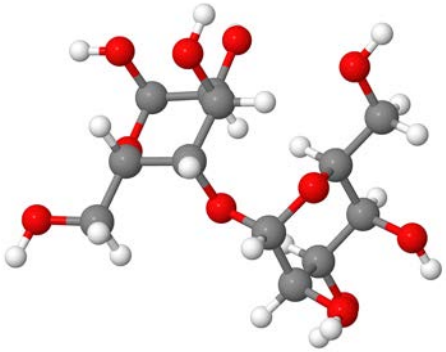
IDENTIFY IMPURITIES

VARIOUS COMPOSITIONAL PROPERTIES

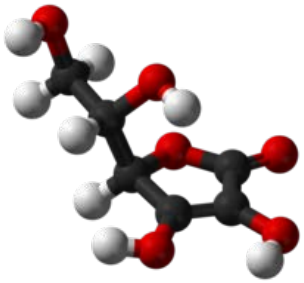
FATTY ACIDS



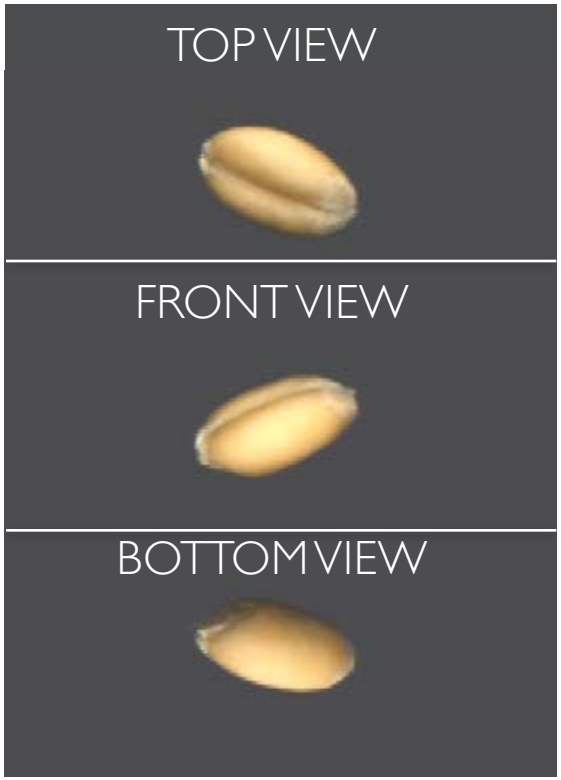
SUGAR



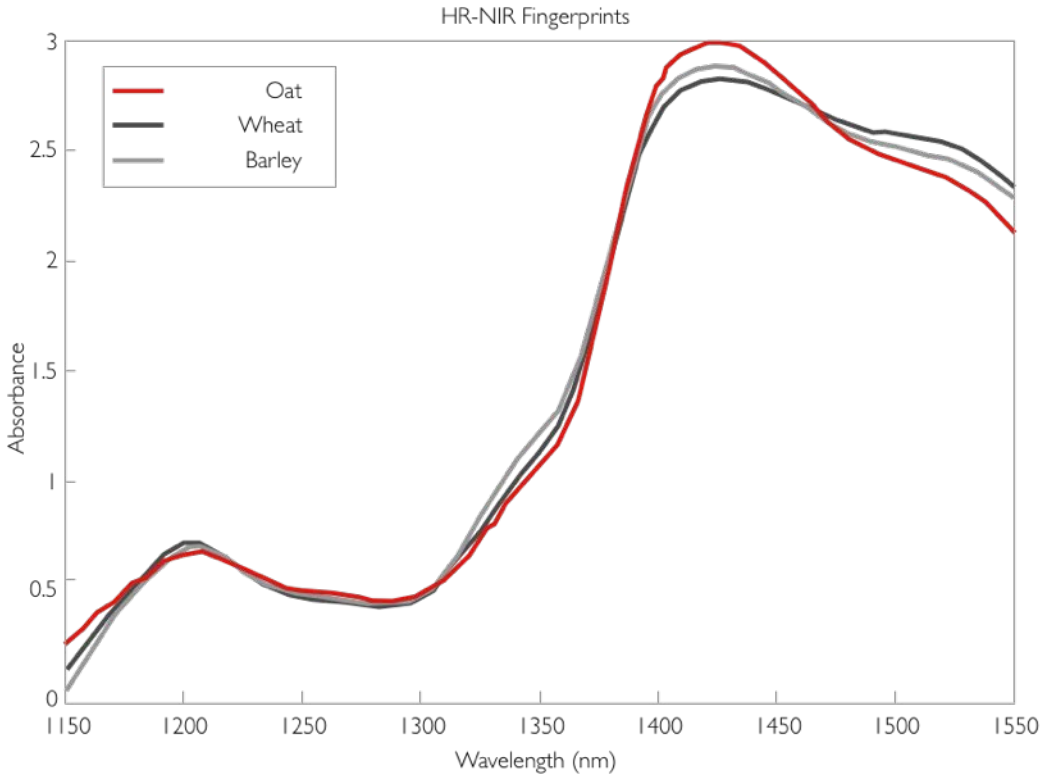
PROTEIN FRAGMENT



ANTIOXIDANTS

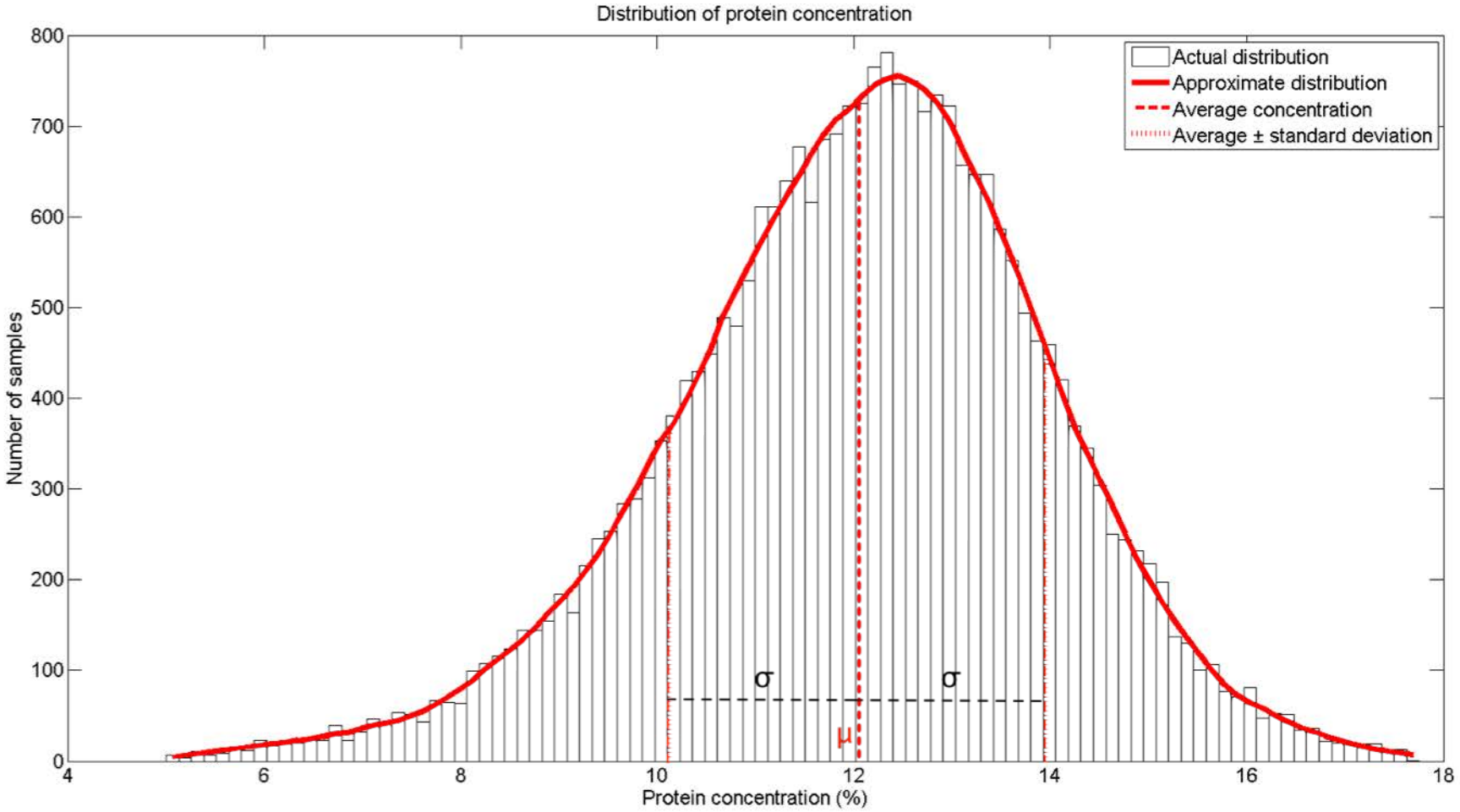


3D image – wheat kernel

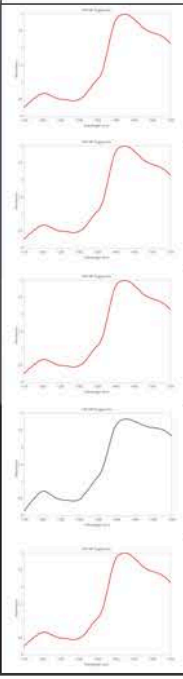


NIR spectra for oat, wheat and barley

we acquire information for the entire batch…



…and for each individual grain

Image	Spectra	Protein [%]	Moisture [%]	Length [mm]	Width [mm]	Area [sqmm]	Elongation Factor [-]	Prediction Index	Label
		12.23	12.34	9.21	2.45	22.58	4.58	1.02	Oat
		13.65	11.21	8.76	2.76	24.21	4.48	1.12	Oat
		11.42	12.13	7.78	2.57	20.00	3.85	1.08	Oat
		15.35	11.05	7.25	3.97	28.78	3.97	0.92	Contaminant
		12.78	10.98	11.58	3.12	36.17	4.72	1.01	Oat

QSORTER EXPLORER

Laboratory device for quality control

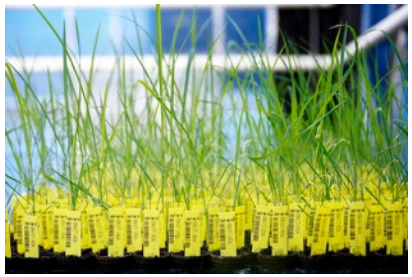
- Single grain analysis
- Near Infrared Spectroscopy
- 3D Imaging
- Parameter distribution
- Easy to operate

- Speed: 3000 kernels/minute
- Multiple criteria sorting
- Accurate pneumatic sorting
- Large samples

How is being used ?

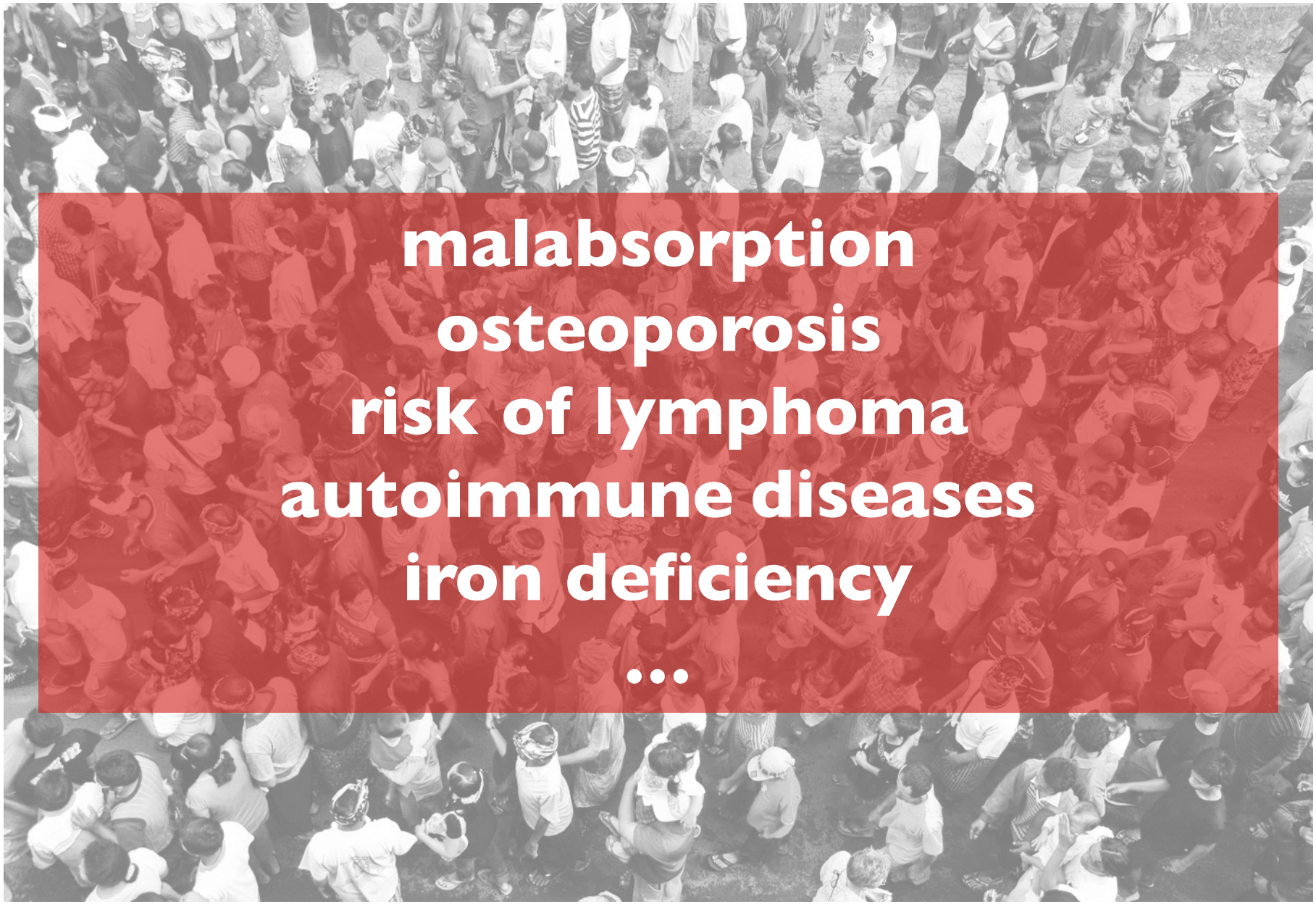
Quality Inspection

Process Monitoring



Breeding &
Product Development

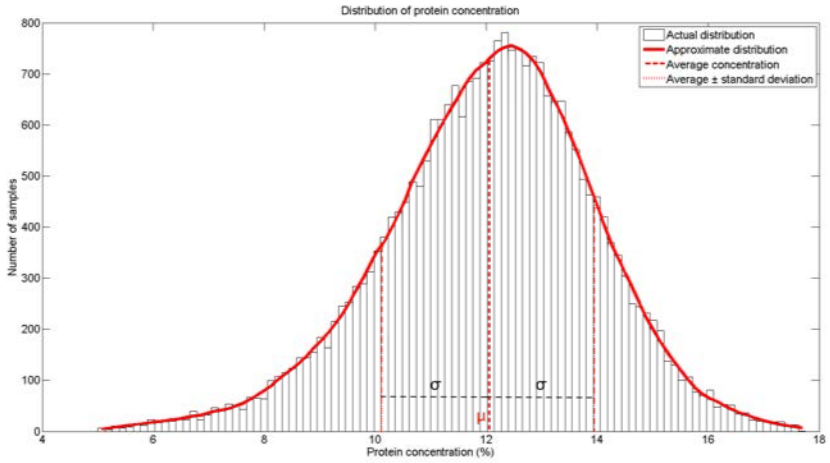
IDENTIFICATION OF GLUTEN CONTAMINANTS IN OATS

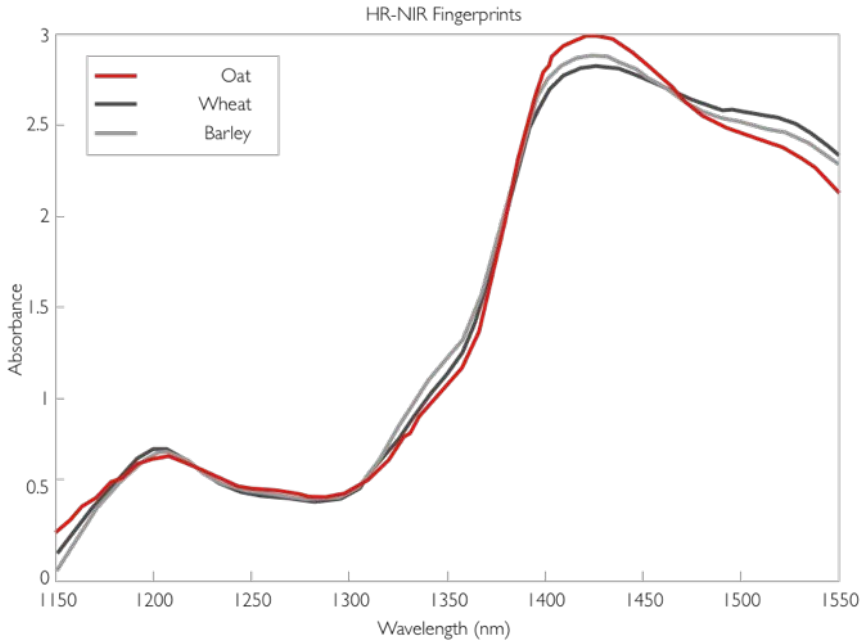

malabsorption
osteoporosis
risk of lymphoma
autoimmune diseases
iron deficiency
...

QSorter Technology Benefits

Manual Inspection	R5 Elisa Test	QSorter Technology
Subjective assessment	-	> 97% accuracy
Risk of human errors	-	Automatic process
250 g/h	Very small samples	Up to 5 kg/h
Low repeatability	-	99% repeatability
	Destructive	Non-destructive
	4 hours per test	Testing & sorting in the same time
	Specialized personnel	Easy to use
	Fully equipped lab	No additional equipment needed
		> 97% accuracy in identifying contaminants
		> 95% accuracy in identifying oats

Results of analysis





Length [mm]	Width [mm]	Area [sqmm]	Elongation Factor [-]	Protein [%]	Moisture [%]	Label
8.82	2.45	16.18	4.58	12.23	12.34	Oat
9.72	2.76	20.69	4.48	14.65	11.21	Oat
8.72	3.03	20.34	3.66	16.21	12.51	Oat
7.78	2.57	15.34	3.85	11.42	12.13	Oat
9.21	2.96	20.84	3.97	15.35	11.05	Oat
11.58	3.12	24.91	4.72	12.78	10.98	Contaminant
9.03	2.96	20.38	3.88	12.91	11.76	Oat
5.48	1.73	7.20	4.04	16.23	11.74	Oat
10.18	2.90	22.63	4.47	17.01	11.35	Oat
9.22	2.73	19.27	4.30	13.31	10.65	Oat

Contact Us

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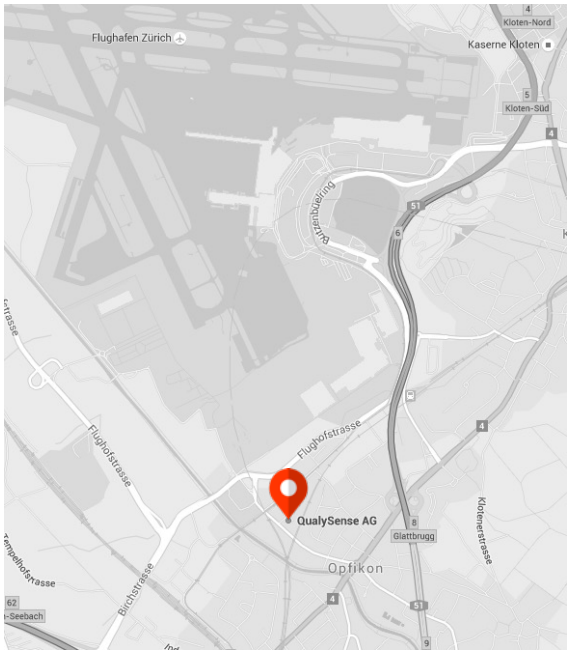
www.qualysense.com