



Oratory



WHAT IS IT

VALERY IS AN INNOVATIVE DEVICE EQUIPPED WITH ARTIFICIAL INTELLIGENCE AND VISION ABLE TO DETERMINE THE CHARACTERISTICS OF THE RAW MATERIALS AND LEARN THE CONCEPT OF "GOOD RAW MATERIAL", AS AN OPERATOR WOULD DO.

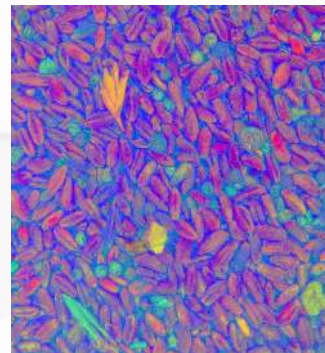
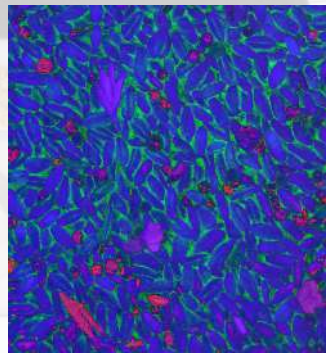
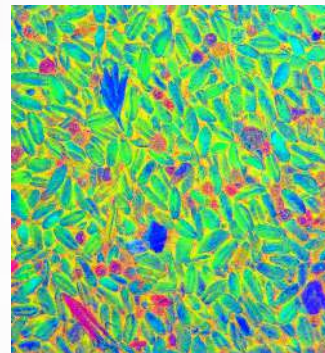
VALERY CAN BE USED **OFFLINE**, TO OBJECTIFY THE QUALITY OF THE PRODUCT AND THE WASTE CONTAINED IN IT, OR **ONLINE**, WHEN LOADING A SILO, TO DETERMINE THE WASTE CONTAINED AND THE POTENTIALITY OF THE PRODUCT BEFORE PROCESSING, OPTIMIZING THE PRODUCTION MIXES.

HOW DOES IT WORK

VALERY ANALYZES IMAGES IN DIFFERENT COLOR SPACES, IDENTIFYING THE FOLLOWING PARAMETERS:

- THE MAXIMUM YIELD/QUANTITY OF STARCH;
- QUANTITY OF ASH IN THE ENDOSPERMA/BRAN;
- QUANTITY OF PROTEINS;
- QUANTITY OF WASTE.

VALERY USES DIFFERENT ARTIFICIAL VISION TECHNIQUES TO SEGMENT THE DEGREES OF THE ACQUIRED IMAGES OF THE RAW MATERIAL AND IDENTIFY THE CHARACTERISTICS. INSTALLED ONLINE, VALERY INTERFACES WITH EXISTING AUTOMATION SYSTEMS AND IS AN INDUSTRY 4.0 INVESTMENT.



SOFTWARE

VALERY ACQUIRES A HIGH AMOUNT OF DATA ON THE MONITORED PRODUCT WHICH, COMBINED WITH EACH OTHER, ALLOWS TO IDENTIFY THE PRODUCT CHARACTERISTICS SOUGHT.

THESE DEDUCTIONS ARE PERFORMED BY AN INTELLIGENT SOFTWARE THAT VALERY INCLUDES. IT IN FACT COMPARES THE DATA OBTAINED WITH WHAT IS PRESENT IN THE DATABASE, IDENTIFYING AND QUANTIFYING THE DIFFERENCES, RETURNING SIGNIFICANT PARAMETERS.

HARDWARE

THE DEVICE IS MADE UP OF A SPECTROPHOTOMETER, A LASER BLOCK AND AN INSPECTION CHAMBER THAT OPERATES IN THE VISIBLE, EXTREMELY INNOVATIVE. THE SUPPORTS INSIDE ARE COMPLETELY 3D PRINTED.



IMAGE SEGMENTATION & PATTERN RECOGNITION

THE SOFTWARE IS ENRICHED WITH MATHEMATICAL AND IMAGE ANALYSIS TOOLS THAT ALLOW YOU TO IDENTIFY SOME DETAILS ON THE RAW MATERIAL THAT MAY BE OF GREAT INTEREST.

FOR EXAMPLE, WITH VALERY IT IS POSSIBLE TO IDENTIFY THE PROTEIN LEVEL OF CEREALS, THE QUANTITY OF WASTE PRESENT AND DAMAGED OR DISEASED GRAINS. THROUGH PATTERN RECOGNITION TECHNIQUES IT IS POSSIBLE TO IDENTIFY THE TYPE OF DISEASE THAT AFFECTS EACH INDIVIDUAL GRAIN.

ANOTHER INTERESTING ANALYSIS THAT VALERY IS ABLE TO DO IS THE IDENTIFICATION OF ALLERGENIC ELEMENTS, SUCH AS SOYBEANS, AMONG THE BEANS.