Dear Renata Pharma Team,

Please find below an offer for the following 3 custom solutions modules in ZEN Core.

1. Automated size, shape, and crystallinity analysis for particulate matter in accordance with USP 788
2. Custom report for cumulative historical data
3. Automatic bio-measurements

The total price for the 3 modules is **15,000 Euros**.

Please don’t hesitate to contact us in case of any questions.

Best Regards,

Dr. Manoj Mathew

# Offer for custom solutions

**Overview**

Renata Pharma, Bangladesh acquires pharmaceutical images using a microscope. They aim to visualize and analyze the size, shape, and crystallinity of acquired images. They are also interested in generating a custom report for cumulative historical data. They also would like to do automatic bio-measurements with the same microscope.

**Description of Software Modules:**

**Software Module [Automated size, shape, and crystallinity analysis for particulate matter in accordance with USP 788]**

The standard ZEN Core Image Analysis Module performs image analysis on particle images and computes particle parameters like size, shape, area etc. The capabilities of ZEN Core image analysis module are further enhanced using a custom ZEN Core workflow.

1. The custom workflow ***automatically computes the size and shape features*** including the statistical parameters and displays the results to the user.
2. A ***specialized algorithm is offered to compute the statistical parameters*** of the particles in the image.
3. The ***crystallinity feature*** is detected via the crystal structure variations (like dark cross in maize starch image) of the particles under polarization. This can be achieved using the custom image analysis routine in the workflow.
4. The workflow can also generate the ***histogram*** chart illustrating percent distribution of particle sizes.
5. Results are presented in ***custom ZEN Core Report***.

**Software Module [Custom report for cumulative historical data]**

Historical Report displays all project details and results from a user-specified timepoint to the present. Manually creating such a cumulative report for historical data can be a hugely cumbersome process.

1. The offered software module ***automatically generates custom cumulative report for the historical data***.
2. This is made possible using a ***custom software module*** which cumulates the parameters from all the previously saved ZEN Core reports.

**Software Module [Automatic bio-measurements]**

1. When viewed under the microscope, Gram-positive bacteria will retain the primary stain and appear purple/violet, Gram-negative bacteria will appear red/pale because they do not retain the primary stain.
2. This behavior is made use of to develop a ***custom image analysis workflow in ZEN Core*** and perform automatic biological measurements.
3. Please note that having a color camera for image acquisition is a pre-requisite for this module.

**Pricing Information**

Estimated delivery time is 1 month from the placement of the purchase order:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No: | Description | Catalog Number | Unit Price (Euro) | Unit Nos | Total Price (Euros) |
| 1 | Automated size, shape, and crystallinity analysis for particulate matter in according to USP 788 | 410190-0105-005 | 1 | 1 | **5,000** |
| 2 | Custom report for cumulative historical data | 410190-0105-005 | 1 | 1 | **5,000** |
| 3 | Automatic bio-measurements | 410190-0105-005 | 1 | 1 | **5,000** |
|  | Total |  |  |  | **15,000** |

This offer is valid until 28/02/2022.

We hope this offer corresponds to your requirements.

Carl Zeiss Microscopy GmbH