

# EXIMIOUS

**STEERLife's True Continuous Effervescent (EVT) Technology for enhanced Convenience, Compliance, Efficacy & Manufacturing Efficiency**



## **MOVING FROM 'SWALLOWING' TO 'SIPPING'**

While tablets have been the most popular dosage form for various therapies and lifestyle interventions, it is indeed a surprising statistic given that a *Harvard School 2014 report* indicated that 1 in 3 people gag, vomit or choke<sup>1</sup> while swallowing a tablet. This was further supported by a *Harris Interactive Study in the US in 2015* which came out with a finding where 40% of the population had difficulty swallowing medicines<sup>2</sup>.

The problem is exacerbated in geriatric patients and in children both of whom are populations which have had swallowing problems historically.

**“1 in 3 people gag, vomit or choke while swallowing a tablet”**

This gives rise to the question: Do we really need to swallow? Why can't medicines be taken by drinking? Can we move from swallowing medicines to sipping medicines?

There are many reasons why effervescent dosage forms have not been popular in the past:

- Manufacturing is challenging due to irreversible auto-catalyzing nature of effervescent reaction
- Need for stringent manufacturing environment

- Expensive & labor intensive process due to larger footprint and stringent control
- Inconsistent product performance from batch to batch due to multiple steps and reactive and autocatalytic nature
- Large cycle time due to multiple steps
- Lack of preventive control due to reliance on process end point.

## INTRODUCING EXIMIOUS

**STEERLife's true continuous effervescent technology for the manufacture of effervescent dosage forms in a single step, using anhydrous, solvent free and continuous co-rotating twin screw processing**

Effervescent dosage forms manufactured with **EXIMIOUS** have the following **product** attributes:

- Significantly enhanced product (higher fizz, >90% carbon retention)
- Tablets have faster disintegration time (30 – 60 seconds),
- Clear solution/uniform dispersion
- Improved taste/compliance
- Convenience and accuracy of administration
- Cost ( 30-50% lower conversion cost)
- No solvent use.
- Satisfactory stability under both accelerated and long term conditions
- Highly porous, compressible granules

Further, the **process** attributes are as follows:

- Truly Continuous, Integrated, Single Pot Granulation
- Possibility of both intra and extragranular addition of API
- Significantly reduced footprint

Size of processor	Output/hour	Area required
20mm	25 kg / hour	150 sq.ft
40mm	150 kg / hour	300 sq.ft
60mm	500 kg/ hour	375 sq.ft

- Improved Yield
- Significant savings in operational costs
- Significantly reduced environmental burden
- Completely patent protected

Types of effervescent dosage forms which can be manufactured using **EXIMIOUS** are;

- Effervescent tablets / granules for oral solutions/suspensions
- Rapidly disintegrating tablets for oral solutions/suspensions
- Orally dissolving/disintegrating tablets

For further information on STEERLife's EXIMIOUS True Continuous Effervescent Platform please visit <https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2016042372&redirectedID=true>

**About STEERLife:**

**STEERLife**, a part of STEER Group, is a unique synergy between engineering sciences and pharmaceutical expertise to create technologies that effectively replace conventional batch processing with true continuous manufacturing and help develop unique drug-delivery platforms for lifecycle management, line extension, or pediatric extension of existing products as well as commercializing new products. The company is committed to **changing the way medicines are made and taken**.

[www.steerlife.com](http://www.steerlife.com)

**REFERENCES:**

1. Two tricks to make it easier to swallow pills, <http://www.health.harvard.edu/blog/two-tricks-make-easier-swallow-pills-201411137515>
2. 40% of American Adults Report Experiencing Difficulty Swallowing Pills, <http://www.prnewswire.com/news-releases/40-of-american-adults-report-experiencing-difficulty-swallowing-pills-58973047.html>