(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/03/2022

(21) Application No.202221015019 A
(43) Publication Date : 08/04/2022

(54) Title of the invention : MICROWAVE MEDIATED SYNTHESIS AND CYTOTOXIC EVALUATION OF NOVEL SUBSTITUTED S-TRIAZINE DERIVATIVES

(51) International classification	:C07D0251700000, C07K0005087000, C07D0519000000, G16B0005000000, C07D0303320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)Dr. Deepak Kumar Basedia
Address of Applicant :Technocrats Institute of Technology-Pharmacy, Anand Nagar, BHEL, Bhopal (M.P) 462021, India ---------- ----------
2)Dr. Ashish Jain
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr. Deepak Kumar Basedia
Address of Applicant :Technocrats Institute of Technology-Pharmacy, Anand Nagar, BHEL, Bhopal (M.P) 462021, India ---------- ----------
2)Dr. Balkrishna Dubey
Address of Applicant :Technocrats Institute of Technology-Pharmacy, Anand Nagar, BHEL, Bhopal (M.P) 462021, India ---------- ----------
3)Dr. Ashish Jain
Address of Applicant :School Of Pharmacy, LNCT University, Kolar road Bhopal, MP. ---------- ----------
4)Mr. Vivek singh thakur
Address of Applicant :TIT-College of Pharmacy, Anand Nagar, BHEL, Bhopal (M.P) 462021, India ---------- ----------
5)Mr. Ritesh Patel
Address of Applicant :, Department of pharmaceutical sciences, Indore institute of pharmacy, indore (M.P) 453331, India ---------- ----------
6)Dr. Gurdeep Singh
Address of Applicant :School of Pharmaceutical Science Lovely Professional University Phagwara, Punjab, 144411, India ---------- ----------
7)Dr. Mukesh Kumar Singh
Address of Applicant :School of pharmaceutical Sciences, IFTM University, Moradabad Uttar Pradesh-244102, India ---------- ----------
8)Mr. Sudeep Kumar Mandal
Address of Applicant :Faculty of Pharmacy, Kalinga University, Near Mantralaya, Village- Kotni, Raipur (C.G.) 492101, India ---------- ----------

(57) Abstract :
The present work deals with Microwave mediated synthesis of 2,4,6-triamino-1,3,5-triazine derivatives based on stepwise nucleophilic substitution of chloro group in cyanuric acid at different temperatures with various amines. The study of the comparison of the obtained results of the microwave mediated irradiation and conventional heat method was carried and found that microwave mediated synthesis process increased the yield of products and reactions were completed in lesser time. So the MW irradiation method is better approach for synthesis 1,3,5-triazine derivatives. The procedure of synthesis is simple, lesser time consuming with higher yield. 1,3,5-triazine derivatives also exhibited anti-ulcer, anti-inflammatory, anti-depressant and antiviral activities. All the synthesized derivatives of 2,4,6-triamino-1,3,5-triazine derivative were synthesized and confirmed by physical and spectral analysis. The synthesized compounds were characterized by IR, 1HNMR and Mass spectral data. All the synthesized compounds show characteristic absorption peaks in IR and NMR spectra. Expected molecular ion peak (M+) fragments were observed for the entire compounds in mass spectra. Cancer is one of the most prominent human diseases which has enthused scientific and commercial interest in the discovery of newer anticancer agents from synthesized derivatives. Cytotoxic activity was carried out against breast cancer cell lines. It is found that all the synthesized compounds have significant cytotoxic activity against both MCF-7 and T47D breast cancer cell lines using MTT assay method. Invitro cytotoxic activity of synthesized compounds was carried out by MTT assay method using two breast cancer cell lines (MCF-7, T47D). All the synthesized compounds have significant cytotoxic activity. Newly synthesized compounds have shown promising anticancer activity.

No. of Pages : 17 No. of Claims : 5