

## **DR D.S. Sogi**

### **Research area**

#### **Present**

Waste management in tomato processing through vermin-composting

Studies on the extraction of pigment from watermelon

Studies on sunflower seed proteins isolates

Functional Properties of pulses proteins

#### **Future**

Studies on tomato seed protein protein after biochemical modifications

Degradation of pigment in non-conventional source of oils

### **Research Publication**

1. **Sogi DS**, Kuhni AAM, Bawa AS (1997) Studies on application of 5'nucleotides in mutton soup and chicken noodles as flavoring agents. *Indian Food Packer* **51** (3): 49-51
2. Bawa AS, Kaur B, **Sogi DS** (1998) Effect of thickeners on the quality of tomato soup. *Indian Food Packer* **52**(2): 21-25
3. **Sogi DS**, Bawa AS (1998) Dehydration of tomato processing waste. *Indian Food Packer* **52** (2): 26-29
4. **Sogi DS**, Kiran J, Bawa AS (1999) Characterization and utilization of tomato seed oil from tomato processing waste. *J Food Sci Technol* **36**(3): 248-249
5. **Sogi DS**, Shergill RS, Bawa AS, (2000) Effect of packaging material on storage of shakanjvi concentrate. *J Food Sci Technol* **37**(3): 296-299
6. Bhullar JK, **Sogi DS** (2000) Shelf life studies and refining of tomato seed oil. *J Food Sci Technol* **37**(5): 542-544
7. **Sogi DS**, Bawa AS, Garg SK (2000) Sedimentation system for seed separation from tomato processing waste. *J Food Sci Technol* **37**(5): 539-541
8. Gujral HS, Sharma P, Singh N, **Sogi DS** (2001) Effect of Hydrocolloids on the Rheology of Tamarind Sauce. *J Food Sci Technol* **38**(4): 314 - 318
9. **Sogi DS**, Singh S (2001) Study of bitterness development in Kinnow juice, ready to serve beverage, squash, jam and candy. *J Food Sci Technol* **38**(4): 433 - 438.
10. **Sogi DS**, Arora MS, Garg SK, Bawa AS (2002) Fractionation and electrophoresis of tomato waste seed proteins. *Food Chemistry* **76**(4): 449-454

11. **Sogi DS**, Garg SK, Bawa AS (2002) Functional properties of seed meals and protein concentrates from tomato processing waste. *J Food Sci* **67**(8): 2997-3001
12. **Sogi DS**, Sidhu, JS, Arora MS, Garg SK, Bawa AS (2002) Effect of tomato seed meal supplementation on dough and bread characteristics of wheat (PBW-343) flour. *Int J Food Prop.* **5**(3): 563-571
13. **Sogi DS**, Shivhare US, Bawa AS, Garg SK (2003) Water sorption isotherms and drying characteristics of tomato seeds. *Biosystems Engg* **84**(3): 297-301
14. Saini S, **Sogi DS**, Bawa AS (2003) Shelf life studies on chemically preserved sand pear (*Pyrus pyrifolia* cv *Patharnakh*) pulp. *J Food Sci Technol* **40**(2): 230-232.
15. **Sogi DS**, Arora MS, Garg SK, Bawa AS (2003) Optimization of tomato seed protein extraction using response surface methodology. *J Food Sci Technol* **40**(3): 267-271.
16. **Sogi DS**, Kaur J (2003) Studies on the preparation of margarine from tomato seed oil. *J Food Sci Technol* **40**(4): 432-435
17. **Sogi DS** (2003) Effect of concentration and temperature on the viscosity of watermelon juice. *J Food Sci Technol* **40**(5): 509-511
18. Babu R, Varshney ML, **Sogi DS** (2004) Preservation of raw milk with lactoperoxidase system. *J Food Sci Technol* **41**(1): 42-46
19. **Sogi DS**, Kaur I, Batra A (2004) Utilization of non-conventional tomato seed oil in mayonnaise. *J Food Sci Technol* **41**(1): 47-50
20. Virk B, **Sogi DS** (2004) Extraction and Characterization of Pectin from Apple (*Malus pumila* cv Amri) Peel Waste. *Int J Food Prop* **7**(3): 1-11
21. **Sogi DS**, Arora MS, Gupta U, Garg SK, Bawa AS (2004) Utilization of tomato seed meal for Enzyme production using *Aspergillus niger*. *J Food Sci Technol* **41**(2): 207-210
22. **Sogi DS**, Bhatia R, Garg SK, Bawa AS (2005) Biological Evaluation of Tomato Waste Seed Meals and Protein Concentrate. *Food Chem* **89**(1): 53-56
23. Thind GK, **Sogi DS** (2005) Identification of coarse (IR8), fine (PR-106) and superfine (Basmati 386) rice cultivars. *Food Chem.* **91**(2): 227-233
24. Kaur D, **Sogi DS**, Garg SK, Bawa AS (2005) Floatation cum sedimentation system for separation of skin and seed from tomato pomace. *J Food Engg* **71**: 341-344
25. **Sogi DS** and Rheja S (2005) Preparation of Ginger, Onion and Garlic Flavored Mayonnaise. *J Food Sci Technol* **42**(4): 311-314
26. Wani A A, **Sogi DS**, Shivhare US, Ahmed I, Kaur D (2006) Moisture adsorption isotherms of watermelon seeds and kernels. *Drying Technol* **24**:99-104
27. Wani AA, **Sogi DS**, Grover L, Saxena DC (2006) Effect of temperature, alkali concentration, mixing time and solvent/meal ratio on extraction of proteins from watermelon (*Citrullus lanatus* cv *Mateera*) seed meal. *Biosystems Engg* **94**: 67-73

28. Kaur D, Sharma R, Wani AA, Gill BS, **Sogi DS** (2006) Physico-chemical changes in seven tomato (*Lycopersicon esculentum*) cultivars during ripening. *Int J Food Prop.* **9**: 747-757
29. Kaur D, **Sogi DS** (2006) Degradation kinetics of lycopene and visual colour in tomato peel isolated from pomace. *Int J Food Prop.* **9**: 781-789
30. Kaur D, Wani AA, **Sogi DS**, Shivhare US (2006) Sorption isotherms and drying characteristics of tomato peel isolated from tomato pomace. *Drying Technol* **24**:1515-1520
31. Sidhu R, Gill BS, **Sogi DS**, Singh DP (2006) Edible films and coatings-I. *Bev Food World* **33 (10)**: 62-66
32. Chandi GK, **Sogi DS** (2006) Functional properties of rice bran protein concentrates. *J Food Engg* **79**: 592-597
33. Singh DP, Gill BS, **Sogi DS** (2007) Soybean a healthful food. *Proc Food Ind* **10**: 12-14
34. Kaur R, Gill BS, **Sogi DS** (2007) Studies on the effect of aqueous hydrochloric acid on properties of wheat starch. *J Food Sci Technol* **44**(4): 386-390
35. Chandi GK, **Sogi DS** (2007) Biochemical characterisation of rice protein fractions. *Int J Food Sci Technol*, **42**: 1357-1362
36. Sidhu R, Gill BS, **Sogi DS**, Singh DP (2007) Edible films and coatings-II. *Bev Food World* **34 (10)**: 36-41
37. Oberoi DPS, **Sogi DS**, Gill BS (2007) Noodle processing technology. *Bev Food World* **34 (10)**: 68-70
38. Singh DP, Kaur D, Gill BS, **Sogi DS** (2007) Design, Construction and Evaluation of Fruit and Vegetable Sorting Machine. *India Food Packer* **61** (5): 85-90
39. Kaur D, Wani AA, Oberoi DPS, **Sogi DS** (2008) Effect of extraction conditions on lycopene extractions from tomato processing waste skin using response surface methodology. *Food Chem.* 108(2): 711-718
40. Kaur A, Kaur D, Oberoi DPS, Gill BS, **Sogi DS** (2008) Effect of dehydration on physico-chemical properties of mustard, mint and spinach. *J Food Prop Pres.* 32:103-116
41. Sharma R, Kaur D, Oberoi DPS, **Sogi DS** (2008) Thermal degradation of pigments and visual colour in watermelon juice. *Int J Food Prop* 11:439-449.
42. Wani AA, Kaur D, Ahmed I, **Sogi DS** (2008) Extraction optimization of watermelon seed protein using response surface methodology. *LWT- Food Sci Technol* 41 (8)1514-1520
43. Singh GD, Wani AA, Kaur D, **Sogi DS** (2008) Characterisation and functional properties of protein of some chickpeas (*Cicer arietinum*) cultivars. *J Sci Food Agric.* 88(5): 778-786
44. Gupta S, Chandi GK, **Sogi DS** (2008) Effect of heat on the functional properties of rice bran protein concentrate. *Int J Food Engg* 4( 2): Article 8.
45. Sharma U, Singh C, Kaur G, Oberoi DPS, **Sogi DS** (2008) Drying characteristics of cauliflower. *Adv Food Sci* 30(2): 63-69

46. Chawla C, Kour D, Oberoi DPS, Sogi DS (2008) Drying characteristics, sorption isotherms and lycopene retention of tomato pulp. *Drying Technology* 26: 1257-1264
47. Naula G, Kaur D, Oberoi DPS, **Sogi DS** (2009) Thermal degradation kinetics of oleoresins extracted from tomato paste. *J Food Sci Technol* 46(1): 75-76
48. Chandi GK, **Sogi DS** (2008) Characterization of Traditional (*Basmati 370*) and developed (*Pusa Basmati 1*) Basmati Rice. *Int J Food Prop* 11:910-918.
49. Gunjan Narula, Devinder Kaur, **D.P.S. Oberoi** and D.S. Sogi (2009). Thermal degradation kinetics of lycopene in oleoresin extracted from tomato paste. *Journal of Food Science and Technology*, 46(1), 75-76.
50. Ravi Sharma, **D.P.S. Oberoi**, D.S. Sogi, B.S. Gill (2009). Effect of gums and sugars on the pasting properties of cassava starch. *Journal of Food Processing and Preservation*, 33, 401-414.
51. Birmaninder Singh, Davinder Pal Singh Oberoi, Idrees Ahmed Wani and Dalbir Singh Sogi (2009). Effect of temperature, salt concentration, pH and time on thermal degradation of pumpkin (*Cucurbita pepo*) puree. *Advances in Food Sciences*, 31(2), 96-101.

## Research Projects

Grant	Title	Funding Agency	Period
Major Research Project	Studies on Watermelon Pigment-Synthesis, Extraction, Degradation and Utilization	University Grants Commission, New Delhi, India	2008-2011
Major Research Project	Production of pigment by <i>Rhodotorula glutinis</i> grown on tomato processing waste	Dept of Biotechnology, Ministry of Science and Technology, New Delhi	2008-2011
DST-FIST	Funds for Improvement of Science and Technology Infrastructure in Universities and higher Education Institutions	Department of Science and Technology, Ministry of Science and Technology, New Delhi	2007-2012
Major Research Project	Extraction of Pigment from Cull Tomatoes their Stabilization and Application in Food Products	University Grants Commission, New Delhi, India	2004-2007
Major Research Project	Studies of Functional and Biochemical Aspect of Tomato Processing Waste Seed proteins	University Grants Commission, New Delhi, India	1999-2002
Minor Research Project	Studies on the Utilization of Tomato Seed Cake in Cattle Feed	University Grants Commission, New Delhi, India	1998-2000
Minor Research Project	Utilization of Seed Oil from Tomato Processing Waste for the Preparation of Margarine	Punjab State Council for Science and Technology, Chandigarh, India	1998-1999

**Conferences /seminar/workshop**

**CONFERENCE/ SYMPOSIUM/ /CONVENTIONS**

**International**

1. Third International Food Convention “IFCON 1993”

Organizer: Association of Food Scientists and Technologists, Central Food Technological Research Institute.

Date / Place: September 7-11, 1993 at Central Food Technological Research Institute, Mysore, India

Poster Presentation - 1: **Application of 5’ Nucleotides in Food Products**

Author: **Sogi DS**, Kuhni AAM

Poster Presentation - 2: **Screening of Fungal Culture for Production of Extra cellular Nuclease**

Author: **Sogi DS**, Kuhni AAM

2. Fourth International Food Convention “IFCON 1998” on Trends in Food Science and Technology: Global Prospective.

Organizer: Association of Food Scientists and Technologists, Central Food Technological Research Institute, Defence Food Research Laboratory.

Date / Place: November 24-27, 1998 at Central Food Technological Research Institute, Mysore, India

Poster Presentation – **Characterization and Utilization of Tomato Seed Oil from Tomato Processing Waste**

Author: **Sogi DS**, Kiran J, Bawa AS

3. Fifth International Food Convention “IFCON 2003” on “Innovative Food Technologies and Quality System – Strategies for Global Competitiveness”

Organizer: Association of Food Scientists and Technologists; Central Food Technological Research Institute; Defence Food Research Laboratory.

Date / Place: December 5-8, 2003 at Central Food Technological Research Institute, Mysore, India

Poster Presentation: **Characterization and Functional Properties of Basmati Bran and its Protein Concentrate Obtained from First and Second Stage of Polishing**

Author: **Sogi DS**

4. Symposium on “Emerging and Novel Food Processing Technologies”

Organizer: McGill University, Montreal, Canada; Shastri Indo-Canadian Institute, Calgary, Canada; Defence Food Research Laboratory, Mysore, India

Date / Place: December 19-20, 2008 at Defence Food Research Laboratory, Mysore, India

Oral Presentation: **Neutraceutical Aspect of Lycopene**

Author: **Sogi DS**

5. Sixth International Food Convention “IFCON 2008” on “Newer Challenges in Food Science and Technology: Industrial Perspective”

Organizer: Association of Food Scientists and Technologists; Central Food Technological Research Institute; Defence Food Research Laboratory.

Date / Place: December 15-19, 2008 at Central Food Technological Research Institute, Mysore, India

Poster Presentation: **Anti-Cancer Activities of Lycopene Isolated from Tomato Waste**

Author: Sogi DS, Kaur D

## **National**

6. Seminar on "Motivational Campaign on Quality Control of Food Products"

Organizers: Small Industry Service Industries, Ludhiana; Department of Food Science and Technology, G.N.D.U., Amritsar.

Date / Place: February 1, 1996 at Guru Nanak Dev University, Amritsar

Oral Presentation: **Quality Control in Fruits and Vegetables Products**

Author: **Sogi DS**

7. National Symposium on "Processing, Finance and Marketing in Food Industry"

Organizer: Association of Food Scientists and Technologists; Indian Agricultural Research Institute

Date / Place: October 14, 1996 at Indian Agricultural Research Institute, New Delhi

Poster Presentation: **Dehydration of Tomato Processing Waste**

Authors: **Sogi DS**, Bawa AS

8. Third Punjab Science Congress and Symposium on "100 Years of Post Mendelian Genetic: Advent of Biotechnology

Organizer: Punjab Academy of Sciences

Date / Place: December 10-12, 1999 at Panjab University, Chandigarh

Oral Presentation: **Sorption Isotherms and Drying Characteristics of tomato Seeds**

Author: **Sogi DS**, Shivhare US, Bawa AS, Garg SK

9. Conference on "Grain Quality Management: Strategies and Perspective"

Organizer: Department of Food Technology, SLIET, Longowal

Date / Place: January 30-31, 2004 at Sant Longowal Institute of Engineering and Technology, Longowal, India

Poster Presentation: **Controlled / Modified Atmosphere Storage of Pulses**

Author: Singh G, **Sogi DS**

10. Seventh Punjab Science Congress and Symposium on "Information and Life"

Organizer: Punjab Academy of Sciences

Date / Place: February 7-9, 2004 at Guru Nanak Dev University, Amritsar

Oral Presentation: **Sedimentation System for Continuous Separation of Skin and Seed from Tomato Pomace** Author: **Sogi DS**, Kaur D, Garg SK, Bawa AS

**Chaired** the Session on **Food Science and Nutrition**

11. Eight Punjab Science Congress and Symposium on "Information and Life"

Organizer: Punjab Academy of Sciences

Date / Place: February 7-9, 2005 at Guru Nanak Dev University, Amritsar

Poster Presentation: **Effect of pectinase on extraction of tomato seed oil**

Author: Bhatia M, **Sogi DS**, Thind GK

Poster Presentation: **Physical and Biochemical Characteristics of Basmati Rice**

Author: Thind GK, **Sogi DS**,

12. National Conference on “Food and Nutrition Security: Food and Biotechnology Intervention”

Organizer: Department of Food Engineering and Technology, SLIET, Sangrur; Association of Food Scientists and Technologists, Mysore

Date / Place: March 22-23, 2007 at Sant Longowal Institute of Engineering and Technology, Sangrur.

Oral Presentation: **Agro By-Product Utilisation- World and Indian Scenario**

Author: **Sogi DS**

Poster Presentation-1: **Potential of Indian water chestnut for food processing Industries**

Author: Singh GD, Saxena DC, **Sogi DS**

Poster Presentation-2: **Moisture dependent properties of sunflower (*Helianthus annuus L*) seed**

Author: Sharma R, Gupta RK, **Sogi DS**, Singh B

13. National Symposium on “Recent Advances in Analytical Sciences and Applications”

Organizer: Indian Society of Analytical Scientists-Delhi Chapter and  
Department of Chemistry, Himachal Pradesh University, Shimla

Date / Place: April 9-11, 2007 at Himachal Pradesh University, Shimla

Oral Presentation: **Effect of addition of tomato peel in the poultry feed on the lycopene content of egg yolk**

Author: **Sogi DS**, Bajwa IS, Bajwa U, Gill BS, Kaur D

14. National Seminar on “Impact of Food Technology in Present Scenario”

Organizer: Department of Home Science, Apeejay College of Fine Arts, Jalandhar

Sponsor: University Grants Commission, New Delhi

Date/Place: September 8, 2007 at Apeejay College of Fine Arts, Jalandhar

Keynote address: **Impact of Food Technology in Present Scenario**

15. National Seminar on “Application of Radioisotopes and Radiation Technology”

**Organizer:** Department of Physics, Guru Nanak Dev University, Amritsar in collaboration with National Association for Application of Radioisotopes and Board of Radiation and Isotopes Technology, Mumbai

**Sponsor:** Department of Atomic Energy, Mumbai; Atomic Energy Regulatory Board, Mumbai; Board of Research in Nuclear Science, Mumbai

**Date/Place:** February 7-8, 2008 at Guru Nanak Dev University, Amritsar